Febrifugum Magnum,

Morbifugum Magnum:

OR, THE

Grand FEBRIFUGE *improved.*

BEING

An ESSAY, to make it probable, that common Water is good for many Distempers that are not mentioned in Dr. HANCOCKE's *Febrifugum Magnum.*

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CHAP. I.

Of the Phrenitis, *or* Phrenſy, *and* Delirium, *or* Doating.

WHEN the original and principal Diſorder is ſuch an Indiſpoſition in the Brain as hinders the true Exerciſe of Senſe, Imagination, Memory, and Reaſon, 'tis called *Phrenitis*. When this proceeds from an Inflammation, from an ill Diſpoſition of any other Part, ſuch as the Midriff, Stomach, Lungs, Womb, *&c.* or from a Fever, 'tis call'd a *Delirium*. The Difference between theſe is this, that the firſt is conſtant and continual, the ſecond is only by Conſent with the other Parts, and when the Diſtemper is cured or goes off, the *Delirium* goes off too.

Tho' we are pretty ſure that the Brain is that Part or Place of the Body where Senſe, Imagination, Remembrance, Underſtanding, and Reaſon are exerciſed, yet we know ſo little of the true Reaſon of theſe Things, the exact Place where, the Manner how, and the Inſtruments by which theſe foreſaid Acts are done and exerciſed. That it is very hard to give any tolerable, much leſs clear Account, what is the Cauſe and Manner of the undue and irregular Exerciſe of 'em; and therefore there are hardly two Writers of any Note to be found, that give exactly the ſame Account of the Cauſe of theſe, and thoſe Diſtempers that are pretty near a-kin to them, that is, *Mania*, Madneſs, *Melancholia*, Melancholy.

The Difference moſt Phyſicians aſſign is this, that *Phrenitis*, or Phrenſy, is *Delirium cum Febre*, a *Delirium* with a Fever following or going along with it. And *Mania* Madneſs, is *Delirium ſine Febre, cum Audacia & Furore*, a *Delirium* without a Fever, with Boldneſs and Raving. *Melancholia* Melancholy, is *Delirium cum Metu & Triſtitia*, a *Delirium* with Fear and Sadneſs. Whereas Writers make a *Phrenitis* or Phrenſy to partake of both, ſometimes the one, and ſometimes the other.

Nay,

Nay, Writers are not very well agreed as to the Place where this Diſtemper lies.

Some place it in the Subſtance of the Brain, others in the Ventricles of the Brain, others in the Meninges, or the Dura and Piamater. *Willis* in the Globular Part of the Brain, and *Doleus* in that and the *Cerebellum* too, or wherever the Animal Spirits paſs in or about the Brain. And indeed they all pretty well agree in this, that it lies in the irregular or diſorderly Motion, ſome Exceſs or Defect either in Quantity, Quality, or Motion of the Animal Spirits.

As to the Cure of this Diſtemper, they generally agree in theſe following Things, and ſuch like.

I. This Diſtemper generally proceeds from Heat and Dryneſs, either external or internal. Thus being long in the hot Sun, extream and long hot Weather, *&c.* or a Fever, or an Inflammation in any Part that may affect the Brain, or a Gangreen, or Sphacelus, or Stagnation of Blood, or any Abſceſs in or near the Brain, or Worms bred in that Cavity of the Body, or when the Blood is under ſuch an Indiſpoſition, ſo hot, thick, dry, rarified, and expanded, that it cannot get into, circulate through, and freely

paſs out of the Brain, and when the Animal Spirits cannot be duely ſecreted from the Blood, or are under ſuch Obſtructions, or in ſuch an Hurry, that they cannot paſs regularly and quietly through the Brain. And therefore the Writers to a Man preſcribe cooling Things, cooling Diet, cooling Drinks, forbid all Wine and ſpirituous Liquors, commend Reſt, and forbid any Works or Exerciſes that may heat, preſcribe Quiet from Anger and Paſſion, give cooling Medicines, but above all Sleep, which they think is ſo neceſſary to the Cure, that when the ordinary Hipnoticks, or Things to promote Sleep will not do, they allow the Uſe of Houſleek, Henbane, Hemlock, Solanum, Lethale, all which are thought to be cold to a Degree of Poiſon, and therefore they ſeldom venture to give them inwardly, but apply them to the Head under ſeveral Preſcriptions, or give good Doſes of Opiates; and all for this one and main Intention to cauſe Sleep. But here they almoſt all of them give this Caution to have a great Care of over-doing it in giving or applying theſe Narcoticks, becauſe the *Phrenitis* doth often end in a *Coma* or Lethargy, by too much unwary Haſte to promote Sleep.

II. The

II. The Phyſicians that write of this Diſtemper generally agree that ſeveral Sorts of Evacuations are good, as,

1. Blooding. This they do in ſeveral Places of the Body, not only in the Arm, but in the Foot, or in the jugular Veins. Or if the Patient be ſo weak that they think not fit to do that, Cupping with Scarification, either between the Shoulders, or on the fore Part of the Head, and ſometimes on the hinder Part too. This more gradual loſing of Blood I ſuppoſe they believe is leſs dangerous to a weak Patient than the common Way of Bleeding.

There are none that I have read of that diſapprove of Blooding but *Aſclepiades*, who, as *Celſus* tells us, ſaid, *Perinde eſſe his Sanguinem mitti ac ſi trucidentur*, That a Man may as well kill 'em as blood 'em. But he does not tell us the Reaſon *Aſclepiades* gives. *Celſus* himſelf was of another Mind.

Perhaps the Noſe might be the moſt proper Place, if a plentiful Effuſion of Blood could be had that Way. But becauſe the Veins are too ſmall, *Zacutus Luſitanus* tells us, he cut a Quill round in ſeveral Places, as deep as one does to make a Pen, and opened it to the

Form

Form of a Star, and by Force cauſed it to be turned round within the Man's Noſe, and that he bled as much as he would deſire, and afterward with ſome Purging and Sweating was well. He tells us likewiſe he cured a Woman that was given up, with Cupping in ſeveral Places, and that together. And indeed Experience ſeems to confirm, that Blooding may be good in this Caſe, when ſome Women have been known to be cured in a *Delirium* by a plentiful Flux of the *Menſes*, and ſome Perſons by a great Fit of the Piles, and a Flux of Blood that Way.

2. They all agree that the Body muſt be kept open by frequent gentle Purgations. But in both theſe a Mean muſt be kept, for ſome have fallen into *Phrenſies* and *Deliriums* by loſing too much Blood, and by too ſtrong Purges. It is very probable, that Diſorder in the Brain that is the Cauſe of *Phrenſies* and *Deliriums*, may ſometimes happen for Want of Blood and Spirits, as well as by a *Plethora*, or too great an Hurry in the Motion of the Blood and Animal Spirits.

Doleus approves of Bleeding an Artery, either in the Arm, or in the Forehead, by which, he ſays, he cured a Man

Man in a Phrenſy without any other Remedy.

3. As the general Practice the Writers in Phyſick recommend, is to give cooling Remedies inwardly, ſo they generally approve of the Application of cooling Things outwardly, to the Head, and other Parts of the Body. Some commend Waſhing the Feet often, or holding them a good while in cold Water.

Celſus orders to boil Vervaine in Water, and waſh the Head with it. They recommend with Water and Vinegar of Roſes ſeveral cooling Things, as Seeds of white Poppey, Lettuce, Peach Kernels, with Roſe or Poppey Water, *&c.* to be applied to the Head; but before this can be conveniently done, the Head muſt be ſhaved, or cut cloſe to the Skin. They commend likewiſe the cleaving ſeveral Animals, Hens, Pidgeons, Puppies, *&c.* (*Doleus* thinks Swallows are the very beſt) and applying them to the Head. Some can ſcarce think this good, leſt the Vapours ſhould be drawn more upwards, but there ſeems to be nothing in that, for no Vapours can be drawn either upwards or downwards but they come with and from the Blood in its Circulation. I am apt

to

to think, that to ſhave the Head, and waſh it often with cold Water, and rub it till it be thorough dry, will be as effectual as moſt of the reſt to cure the Phrenſy, and that in doing that there would be leſs Danger of a *Coma Carus* or Lethargy, than by applying ſome other violent Coolers to the Head in this Diſtemper.

As to thoſe *Deliriums* (Phrenſy, or ſometimes ſuch a Degree of 'em as amounts to a Sort of *Mania*, or an outragious Madneſs) which depend upon other Diſtempers, as an high Fever, or an Inflammation in ſome other Parts of the Body, there is no Need of treating of them ſeparately, becauſe what cures the principal Diſtempers will cure them too; and when Nature has freed itſelf from them, the Diſorder of the Head that came by them, will go off with them.

I confeſs by what I read in Authors, I can hardly find any great Difference between *Phrenitis* a Phrenſy, and *Mania* Madneſs, unleſs we call that a *Phrenitis* or Phrenſy, which is a leſs Degree of Madneſs, and that *Mania* or Madneſs which amounts to an higher Degree of Phrenſy or *Delirium*. 'Tis certain that theſe often are the one changed to the other.

Tho'

Tho' many Authors treat of them diſtinctly, and as different Diſtempers, yet others ſeem to think them but one Diſtemper, and therefore *Celſus* treats only of the *Phrenitis*, *Delirium*, or Phrenſy, and Dr. *Pitcairne* only of *Mania* or Madneſs, and ſo do ſome others, which makes me think they all mean the ſame Thing, and that there is no eſſential Difference between them.

And indeed Authors that treat of them as diſtinct, make very little Difference between them, either as to the Cauſe or Cure of 'em. Of both theſe I ſhall treat, and endeavour to make it probable, that there might be found out a much eaſier and better Way of Cure for this Diſtemper, by the Uſe of cold Water, than by bringing the Body ſo low, by conſtant violent Vomits, Purges, Blooding, and thoſe poiſonous and dangerous Narcoticks, taken inwardly or apply'd outwardly, that are I think too commonly uſed in this Caſe.

What I would propoſe is this,

1. That the Patient ſhould during the Cure drink little or nothing but Water for his ordinary Drink. Nor would there be any Danger in it, for it is plain to Experience, that mad People (if they are not brought too low with violent

Phyſick) are ſo ſtrong that hardly any Thing affects them. They can bear the greateſt Cold without receiving Harm. Whether it be ſomething in their Blood, or whether it be ſuch a Confuſion in their Brain as makes them uncapable of attending to any Thing, unleſs it be perhaps ſome one Thing that was the firſt Occaſion of their Madneſs, is hard to gueſs, but the Fact is plain.

2. That the Head, being ſhaved, or kept cloſe cut, ſhould be frequently waſhed with cold Water, and rubbed dry again, and both the Waſhing and Friction would be very good, to cool the Head, open the Pores of the Skin, and let out ſome of that Matter (whatever it is) that diſorders the Brain. Tho' Medicines taken inwardly do more immediately affect the Brain, by the Circulation of the Blood, yet every Body knows there are inperceptible Paſſages through the *Cranium*, the Skull, by which Vapours may paſs from the Brain, and ſo this Waſhing and Friction of the out Parts, may be very good and uſeful.

3. I cannot think but the frequent Uſe of the Cold Bath would be very good and effectual in the Caſe of Madneſs, only

only taking Care that the Head, as well as other Parts of the Body, be under Water, elſe perhaps it may do as much Hurt as Good.

This is certain, than when a Man is drunk, if he be ducked over Head and Ears in cold Water, he will ſoon come to himſelf, and be ſober. And that when a Man has drank ſo much Wine as to affect his Head, the beſt thing he can do is to drink one (or at ſome Diſtance of Time) more Draughts of cold Water, over Night before he goes to Bed, and the Morning after (which is much better than an Hare of the ſame Dog) this will not only take off the Fumes which diſorder his Head, but will carry off the Wine (unleſs he have drunk to very great Exceſs) and keep it from doing him any Harm. And this is much better and ſafer in that Caſe, than the Drinking (as ſome Good-Fellows do) a great Quantity of Coffee, or any Thing elſe that is commonly known.

No Body will deny that Drunkenneſs is a Kind of Madneſs; and the different Effects of it upon ſeveral Perſons, are remarkable. Some that are good-natured People when they are ſober, are ſtark mad when they are drunk, and do nothing but rage like Furies,

and others that are gay airy People when they are ſober, are mopiſh and melancholy, and will ſcarce ſay one Word when they are drunk. So that according to the ſeveral Diſpoſitions of People, Wine, drunk to Exceſs, may cauſe either a mopiſh or furious Madneſs, for the ſhort Time it laſts, till a good ſound Sleep, or Time takes it off.

4. But above all, I could be glad it were tried, whether Water will make mad People ſweat, as it does People in Fevers. If it will, I am apt to think this would be a very effectual Sort of Evacuation in that Diſtemper. If therefore after the Uſe of the Cold Bath, the Patient were made to drink a good Draught of cold Water, and put to Bed, and Care taken that he throw not of the Cloaths, and could ſweat plentifully, this might be as good a Means both to clear his Blood, and ſettle his Brain, as any other Evacuation. The beſt Time to do this is certainly after the Uſe of the cold Bath, becauſe we find all People after Bathing, as ſoon as they put on their Cloaths, are inclined to a breathing Sweat.

I propoſe not this Method to ſuperſede the Uſe of moderate Blooding, Purging

to

to keep the Body open, or the Uſe of any Specificks, if any ſuch there be, but only againſt the unnatural, and I will ſay, cruel Uſe of ſuch Evacuations, and too much Dependance upon them, which tho' they may ſometimes have been known to cure, yet have often fail'd, or the Conſequents of the Remedy have been worſe than the Diſeaſe.

I now come to ſhew the Cauſes that Phyſicians aſſign for this Diſtemper, and to argue the Probability, upon the ſeveral Suppoſitions, that Water may be good for it.

Moſt Phyſicians believe, the great Fault in this Diſtemper lies in the Animal Spirits, in their Unfitneſs to paſs quietly and eaſily thro' the Brain, which they think moſtly comes from their too much Heat and Fervour, which cauſe a Sort of Exploſion, that diſturbs the regular Motion of them through the Brain.

Now ſince I am certain that the taking of Water cools and quiets the Blood, it muſt more or leſs have the ſame Effect upon the Animal Spirits, which probably are only the finer Parts of the Blood, ſecreted in the Brain from

from it, into the Nerves of the Brain, and diſperſed through the Body.

Riverius thinks Madneſs comes from Convulſions in that particular Part of the Body the Brain, and not without ſome Appearance of Reaſon, for Convulſions come by Fits, and ſo Madneſs does. Mad People are ſometimes more quiet, calm, and eaſy, ſometimes by Fits more outragious, boiſterous, and intractable, which if that be the Cauſe, 'tis likely they will be.

Now I am pretty ſure that Water drank in a Quantity is good to take off convulſive Fits, and ſo may be good in the Caſe of Madneſs.

Many Phyſicians think that Phrenſy or Madneſs comes from the Exuberance of bilious Matter, which heats the Blood, and makes it unfit to paſs regularly thro' the minute Paſſages of the Brain. Now it is certain, that Drinking much Water is a good Way to correct the Bile. And I have by frequent Experience found, that Drinking much Water, or nothing but Water for a few Days, will cure any ordinary Jaundice, that is not gone too far, without any other Remedy, eſpecially if we uſe Exerciſe with it. And I think no Body can doubt that the Jaundice is a bilious Diſtemper.

I find

I find almoſt all Phyſicians in the Cure of Phrenſy or Madneſs preſcribe cooling and diluting Drinks, ſimple or compound.

Now Water has theſe Properties, and is one of the moſt eaſy and natural of thoſe Things that are ranked under that Head, and may be given ſafely in ſuch a Quantity as will without any Danger anſwer that Intention, and therefore cannot but be good in this Caſe.

Bellini ſays, Phrenſy and Madneſs come from hot Things; theſe heat and rarify the Blood, make it require more Room in the Veſſels, and preſs outward upon the Sides of the Canals, and conſequently make Circulation more difficult and irregular, eſpecially in the ſmall Arteries, ſuch as thoſe of the Brain certainly are.

Now ſince Water takes off this Rareſcence, or Swelling in the Blood, makes it require leſs Room, it muſt needs make it fitter to circulate regularly and eaſily in the Brain, and promote the regular Secretion of the Animal Spirits from the Blood into the Nerves, and therefore muſt be good in the Phrenſy and Madneſs.

Dr. *Pitcairne* thinks, that ſometimes when the Blood is unequally rarified, there

there are certain *Moleculæ*, or ſmall Parts of the Blood, that more ſtrongly cohere together than the other Parts of the Blood, which yet are ſo ſmall, that they do not obſtruct the Circulation of the Blood in the greater Arteries, and yet when they come to circulate with the Blood in the ſmall Arteries of the Brain, beget Obſtructions, and cauſe certain Tremors, ſmall Convulſions and Fluctuations, and confuſed Motions of the Animal Spirits, which he thinks diſturb the regular Exerciſe of Imagination, Underſtanding and Reaſon, and are the Cauſe of Phrenſy or Madneſs.

I cannot ſay much either for or againſt this his Opinion. I will only ſay, that I think it much more probable, that if there be any ſuch cohering *Moleculæ*, or ſmall Parts of coagulated Matter that circulate with the Blood, and when they come to the Brain, cauſe Obſtructions and confuſed Motions in the ſmall Veſſels of the Brain, they are much more likely to be taken away, diſperſed, or ſeparated into the Maſs of Blood by Plenty of ſome innocent Liquids (and particularly by Water, which may be given in a large Quantity) than by any Powders, with which a ſmall

Quantity

Quantity of ſome convenient Vehicle is impregnated, or by a few Drops of any Spirit ſo impregnated. 'Tis plain, Water will not heat the Blood, but cool it, and conſequently not increaſe Heat, the ſuppoſed Cauſe of theſe *Moleculæ*. It will dilute and moiſten the Blood, and will be more likely thereby to melt 'em down into the Blood, and reduce it to a more equal Mixture.

The old *Galeniſts* talk much of Vapours in this, and ſome other Caſes aſcending to the Head, and diſturbing the Brain. But how they can aſcend directly thither, they cannot ſhew what from the Body affects the Head muſt be, either by the Continuity of the Nerves of the Body, and ſome Convulſions in the Nerves of the lower Parts, as when we pull one End of a Cord, if it be tenſe, we move the other too. (which ſeems to be the Caſe of Hyſterick Fits.) Or elſe it muſt be carried by the Circulation of the Blood to the Brain, as ſeems to be the Caſe of Inflammations in the lower Parts, when they affect the Brain, by carrying putrid or corrupt Particles of Matter thro' the Blood to the Brain, and ſo diſturbing the Brain in its Operations. But

how theſe can be called Vapours I cannot ſee.

However the Caſe be, Water is certainly a good and convenient Liquid to be given in Inflammations, to cool them, and thereby leſſen the putrid Matter ſent from them to the Brain. And if there can be any Vapours in the Body, that by riſing to the Head affect the Brain, Water will probably lay them, as if we pour cold Water into hot, it will ſoon ſtop the Vapours that riſe from it.

What *Paracelſus* means by his *exalted Mercury*, that affects his *Spirit of Life*, I cannot tell, but as he ſays, Wine exalts and ſublimates this ſuppoſed Mercury, ſo perhaps if there be any ſuch Cauſe of Madneſs, Water might calm and quiet it.

Van Helmont thinks the Cauſe of Phrenſy or Madneſs lies in the *Precordia*, or Veins about the Heart, and talks of certain *Scoriæ* or ruſty Recrements, like thoſe that come from Metals that lie in the Veins, and ſeem to cleave to the Veſſels about the Heart, and that theſe cauſe Madneſs. But if there be any ſuch Thing, Water is a very good Liquid to cleanſe the Veſſels, and waſh them away.

Both

Both *Van Helmont* and Dr. *Willis* think there may be ſome venomous, poiſonous Particles in the Blood, that may ſometimes be the Cauſe of Madneſs; and 'tis certain that the Bites of venomous Creatures often bring *Deliriums* and Madneſs. And I think it were eaſy to make it appear probable, that the Uſe of Water outwardly and inwardly, may be as effectual a Cure for the Bites or Stings of venomous Creatures, as moſt other Things that are in Uſe.

What Dr. *Willis* means by his *Sal Fluidum*, *Sulphur Arſenicale*, and *Aqua Stygia*, I am not Chymiſt enough to underſtand. But one Thing I think he hints that is very fit to be obſerved, that *Deliriums*, Phrenſy, or Madneſs may come from the Want of Animal Spirits, as well as by the diſorderly Motion of them; as in an Agony, Loſs of too much Blood, violent Purging, long Faſting, and ſome other Ways; and therefore I think thoſe that undertake the Cure of mad Folk, ſhould keep a Mean in thoſe Things.

Sylvius thinks, in Madneſs the Animal Spirits are diſordered by a more ſharp volatile Bile, and that the Cauſe of this comes from an Obſtruction in

the Pancreas, or Sweet-Bread, and from the Corruption of its Juice, by the Stagnation of it.

Now I know that Water is a very good Corrector of the Bile, and I am pretty ſure that it is a great Aperient, and Opener of Obſtructions in that and other Parts of the Body, eſpecially if taken in a Quantity.

Thoſe that follow the *Carteſian* Philoſophy, talk of I know not what triangular Particles of Matter floating in the Blood, which, when they come to the Brain, with Difficulty enter the round Paſſages of it, and leave on each Side greater empty Spaces, and ſo give a greater Liberty for the Entrance of their *Materia ſubtilis*, which is always in violent Motion, and to this they attribute the great Diſturbance in the Brain that cauſes Phrenſy and Madneſs.

If there be any Thing in this Hypotheſis, methinks nothing can be more likely to fill thoſe ſuppoſed Spaces, melt and diſſolve the angular Points of thoſe triangular Particles, and conſequently to ſtop and hinder the too violent Motion of their ſubtil Matter, and eſpecially when it rages moſt, as they ſuppoſe it does in hot Weather, then to drink a good Quantity of common Water.

But

But it would be endleſs to ſpeak of all the Cauſes that are aſſigned for this Diſeaſe.

Some Things ſeem to be clear.

1. That ſometimes Worms are the Cauſe of this Diſtemper, and that they are ſometimes bred in the Head. Thus *Doleus* tells us from the *German Ephemerides*, of a Man that was ſtark mad above a Year, and upon a violent Fit of Sneezing from Tobacco, a large hairy Worm came out of his Noſe, and he was well ever after.

Sometimes Madneſs comes from a Multitude of Worms in the Stomach or Belly. Thus I remember a poor Man fifty or threeſcore Years ago, that went ſo mad, that he ran up and down the Country ſtark naked, and continued ſo a great while; but upon ſome Indication or Suſpicion, he had Things given him that made him void a great Number of Worms, and he was well, and continued ſo ever after.

Whether Water will kill Grubs in the Pate, I know not, but I am ſure 'tis good to prevent, keep under, and it may be kill Grubs in the Stomach, and Belly. And if Parents would cauſe their Children to drink Water ſometimes, they would

would not be ſo ſubject to be troubled with thoſe dangerous Animals, that are perhaps the Cauſe of moſt Diſeaſes in Children. It is obſervable, that upon a Puſh of Wet, and a great deal of Rain, we may ſee a good Number of Worms dead upon the Ground.

2. Madneſs proceeds ſometimes from the Poiſon convey'd by the Bites of noxious Animals, and particularly when the Animals themſelves are mad. There are ſo many Inſtances of thoſe that have fallen into Phrenſies upon the Bites of Vipers, Scorpions, Tarantulas, *&c.* and of Creatures mad, as Dogs, Cats, *&c.* that 'tis needleſs to inſiſt upon them. And no doubt the Bite of a mad Man is dangerous as well as that of a mad Dog.

Etmuller tells us of a mad Woman that being taken into Cuſtody, bit the Officer that took her in the Arm, and that the next Day he went as mad as her ſelf.

Sometimes it proceeds, at leaſt for ſome Time, from poiſonous Narcotick Herbs and Simples, Houſleek, Hemlock, Henbane, deadly Nightſhade, Thorn Apple, Opium. And therefore Phyſicians ſeldom adventure on the internal Uſe of

of ſuch Things in the Caſe of Madneſs, for they generally tell us great Caution is to be uſed even in the outward Application of theſe Narcoticks, leſt a Phrenſy or Madneſs end in a *Coma Cautus*, or Lethargy. And therefore Dr. *Pitcairne* tells us, 'tis not ſafe to uſe Opiates, till after Bleeding, Vomiting, and Purging, and that the doing of it will make the Cure more difficult, whereas many have been known to fall into *Deliriums* only with the Uſe of Opium.

Tho' moſt Authors agree in the Uſe of cooling Things in this Caſe, and forbid all ſtrong and ſpirituous Liquors, as thoſe which are apt to put the diſorder'd Spirits into too great an Hurry and Flutter, yet they caution againſt the too much uſe of thoſe that are potentially cold, eſpecially thoſe that are thought to be cold to a Degree of Poiſon. As the free Circulation of the Blood and Spirits, through the ſmall Canals, may be hindered by too great Heat and Dryneſs of the Blood and Spirits, ſo the Circulation may be prejudiced by Things that are cold to a Degree of Poiſon. Indeed almoſt all Liquids may be either heated with Fire, or frozen with Air intenſely cold; and this laſt will ſo damp

damp the Motion of the Spirits, that the Caſe will be much the ſame with the Want of Animal Spirits, by exceſſive Bleeding, Purging, *&c.* which moſt Phyſicians agree may ſometimes cauſe *Deliriums*, Phrenſy, or Madneſs. Now I look upon Water to be the moſt innocent and moderate Cooler, that will cool the Blood without chilling it, and take of the Hurry and diſorderly Motion of the Spirits without damping them, and by thinning and diluting the Blood prepare it for a natural and regular Separation and Secretion of the Spirits from the Blood in the Brain, and by the Fineneſs of its Parts mixing with the Blood, make it and the Animal Spirits circulate more eaſily through the Brain, and perhaps do more towards opening the Obſtructions in it, than moſt other Medicines (whether Liquids or Solids) will do.

One great Deſign in the Cure of Madneſs is to promote a kindly, natural, and quiet Sleep. This is by all Phyſicians accounted very neceſſary to quiet the Spirits, and reduce the Brain to ſuch a State as will make it fit to exerciſe regularly the Animal Functions, or at leaſt will be a great Help towards it. Now I muſt make bold to ſay, I believe

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that Water given in a good Quantity is the moſt innocent Hypnotick, and will give an eaſier, quieter, and more natural Sleep than any of thoſe Things that are reckoned among Hypnoticks, Opiates, or Narcoticks; I have had ſome Experience myſelf in Fevers, Small-Pox, and Meaſles, and I doubt not the World would ſoon have more, if they will but have Patience to try it.

I cannot remember that ever I have ſeen any in violent Fevers, that had any quiet, eaſy, natural Sleep by the Uſe of thoſe Opiates that are commonly given, but only a dozing dreaming Sleep, if it may be called Sleep; for they are neither aſleep nor awake. Theſe Doſes are very fitly called quieting Draughts, for the Patient lies quiet and eaſy as People do in a Trance, and 'tis not unlikely they may be entertained with pleaſing Imaginations, becauſe they have nothing to diſturb them, not knowing where they are, or what is done about them. I ſay, they are well called Quieting, but ſeldom can be called Sleeping Draughts. Nor do I wonder at it, if the Account be true, that the moſt modern Writers give of the Operation of Opium, that it operates upon the Fluids, particularly the Blood, by rari-

fying it, ſeparating its Globules, and expanding it; and then it muſt operate upon the Solids too, by preſſing and extending them beyond their due Tone, and hindering that regular and reciproeal Dilatation and Contraction of the Veſſels, that all our late Phyſicians ſay is ſo neceſſary, next to the Diaſtole and Syſtole of the Heart, to the due and free Circulation of the Blood.

How any one that thinks this Account true, can give Opium in Fevers, I cannot imagine, when the very Thing that cauſes Want of Sleep in Fevers, is that Heat, Rarefaction, Expanſion, Swelling, and violent Motion upon it, of the Blood, which puts the Spirits and nervous Juice in that Heat, Hurry, and Diſorder that does not admit of Sleep. And therefore I am afraid the ſtrongeſt Opiates procure Sleep as they allay Pain, (which they are certainly very good for) by ſtupifying the Solids, and particularly the Nerves, and Animal Spirits in them, and ſo only take away the preſent Senſe of Pain, not the Cauſe of it.

I have before put Hemlock, Henbane, and ſome other Narcoticks under the Rank of cold Poiſons, upon the Authority of the old Phyſicians, but perhaps

haps they may all be hot as well as Opium. I cannot ſee that Phyſicians are well agreed about the Nature and Uſe of Opium; ſome admire it, and ſome are afraid of it. But they own in the Cure of Madneſs, it ſometimes may do Good, and ſometimes a great deal of Hurt, and find by Experience, that four times the Quantity of Opiates will not have that Effect upon mad Men, that the common Doſes have upon other People; and that therefore 'tis difficult to know the true Uſe of them in that Caſe. And it is eaſily obſerved, that in ſome Perſons the Uſe of Opiates is ſo far from helping, that it hinders Sleep (which perhaps may be the Caſe of the hotter Conſtitutions) ſo we muſt leave the Phyſicians to find out the Uſe of it in the Caſe of Madneſs, as well as they can.

All I can ſay, is, that the Phyſicians have generally preſcribed the Uſe of cooling and moiſtening Things (or what they take to be ſo) in the Cure of Madneſs, and generally forbid all thoſe Things that by their Heat irritate the Blood and Spirits, and upon the Suppoſition that Opiates operate upon the Fluids, the Blood and Spirits, by rarifying, expanding, and Swelling them, and encreaſing their pro-

greſſive Motion in the Veſſels, and their internal and circular Motion within themſelves, which are the true Cauſes of their Heat, I cannot ſee how Opiates can do Good, but rather Hurt, in the Caſe of Madneſs.

And as I have never obſerved that the common Doſes of Opiates, given in Fevers, have given any true, ſound, eaſy, and natural, but only a dozing and dreaming Sleep, ſo I have often obſerved in Fevers, Small-Pox, Meaſles, *&c.* that the Uſe of cold Water hath procured an eaſy, ſound, natural Sleep, and therefore in the Caſe of *Deliriums*, Phrenſies, and Madneſs, the Uſe of it, as I have before propoſed, muſt be more likely to procure Sleep, then any Opiates, tho' never ſo ſtrong and powerful, unleſs given in ſuch Quantities as no Phyſician will adventure to do. And I will ſay, I verily believe, that if it were uſed in Fevers, there would be no need of any Opiates, to procure Sleep, or prevent *Deliriums*.

We may ſee by the various Accounts of the Cauſes of Diſeaſes, given by the beſt Phyſicians, how ſhort and dark our Reaſonings are of the Cauſes of Things, and that *Materia ſubtilis*, Gravitation, Attraction, Specifick, Gravity, the Laws of

of Motion, old or new, when applied to form an Hypoth is to ſalve the *Phenomena* of Nature, or to lead us to the intimate Nature and Cauſes of Things are but new Names for the old occult Qualities. And I think experimental Phyſick too ought to be encouraged, for I doubt there is little Knowledge *a priori* to be had by Dint of Reaſon, either of the Cauſes of many Diſeaſes, or the Medicines that will cure them.

I ſhall now produce ſome Inſtances of Authors that have recommended the Uſe of Water in the Caſe before us, and ſome Experiences that occùr in Authors, of the Efficacy of Water in the Cure of theſe Diſtempers.

Riverius ſays, that the Waſhing of the Feet in Water, is good in a Phrenſy, eſpecially if the Patient be dipt often in cold Water, and the ſame is good to procure Sleep; and likewiſe that the drinking of Water is good to procure Sleep. As alſo that a Linen Cloth dipt in Water, and after wringing it a little, if it be laid on the fore Part of the Head, procures Sleep; this, if it be often done, will be more effectual.

Baglivi ſays, that many mad People have been cured, by Dipping them in Water.

Celſus

Celſus ſays, the Head is to be ſhaved, or cut cloſe to the Skin, and is to be bathed with Water with Vervaine boil'd in it.

He ſays, that Sleep is by all Means to be procured, and that ſome do this by giving Water to drink, in which Poppies and Henbane have been boiled.

He tells us likewiſe, that *Aſclepiades* ſaid, Theſe Herbs are needleſs, if not dangerous, leſt the Phrenſy end in a *Coma* or Lethargy, and preſcribes only the Drinking of Water.

Helmont adviſes the Immerſion of Phrentick and mad People in cold Water.

Doleus tells us, that the *German Ephemerides* ſpeak of a young love-ſick mad Man, ſo parch'd and dried, that he was nothing but Skin and Bones, cured with nothing but Bathing in common Water.

Boerhaave ſays, the chief Remedy of this Diſeaſe, is throwing the Patient into the Sea, and continuing him there as long as he is able to bear it. Why throwing him into a Pond or River will not do as well I cannot ſee. If the Salt make it better, ſure a large Veſſel of Water, with as much Bay Salt as

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the Water will take, may do as well. If throwing him in by Force, ſo as to put him in a Fright, can add any Thing to the Cure, that may as well be done in a Pond or River; and if the Fright will do him any Good (as I do not know but it may) it would be beſt to hoodwink the Patient, as they do in the *Hydrophobia*.

He ſays in the ſame Place, that it appears by Anatomical Diſſection, that the Brains of mad People are hard and dry, and the Cortex yellow, which ſeems to make it yet more plain, that to drink Water muſt be good for them.

Sir *John Floyer* ſays, that Dr. *Tyſon* told him, he had cured a Woman in a *Furor Uterinus* by the cold Bath. And Dr. *Baynard* in his Appendix ſays, that great and conſiderable Cures have been done upon maniacal Perſons, even where the Diſtraction has been to Raving, all Hopes of Recovery given over, all the uſual Methods have been baffled, and the Patient ſunk and brought low by often Bleeding and needleſs Purgations, only by a ſpare Diet, chiefly of Roots and Fruits, and keeping the Head cool, *&c.* which I think is beſt, and may be ſufficiently done by Waſhing the

Head

Head often with cold Water, and rubbing it well.

For the Stories he tells of Caps with Snow in them, and cataracts of Water falling upon the Head, I think are an Extream, and if the Patient drank little but Water, and uſed cold Bathing often, I believe it would do the Buſineſs, eſpecially if he could go into a warm Bed, and ſweat after Bathing, which if uſed will be more effectual, if the Patient, when juſt after Bathing, he goes to Bed, take a Pint or Quart of cold Water, which, if he have ſtayed too long in the Cold Bath, will prevent his receiving any Harm by it.

As to what Phyſicians preſcribe for one bit by a mad Dog, that is, ſending him to bathe in Sea Water, it ſeldom does any Good (unleſs the Patient lives juſt by the Sea) for before he can reach the Sea, the Poiſon is ſpread by Circulation, thro' the whole Maſs of the Blood, and the Diſeaſe paſt Cure; and 'tis plain to Experience, that very often it does not work the Cure. In that Caſe therefore it were better the Patient ſhould immediately drink a good Quantity of cold Water, and plunge himſelf ſpeedily into the Water (lancing the Place bitten acroſs to make it bleed) and if it be

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any Part that can be held in the Water (as the Hand, Arm, or Leg) without plunging the whole Body, to clap a deal of Salt upon it, and hold it long in the Water, or go into a large Veſſel of Water, impregnated with as much Salt as it will take. Any of which Ways I doubt not would do better than to ſtay ſo long till he can get to the Sea to bathe in it. And as to the *Hydrophobia*, which is only an higher Degree of that Madneſs, that comes from the bite of a mad Dog; all agree that there is no Cure like that of plunging the Patient, *nolens volens*, often in cold Water. And if after the plunging in Water the Patient were put to Bed and Sweated which, I believe, would be likely to follow with his drinking, (if it be poſſible to make him do it) ſom cold Water, it would much further the Cure. 'Tis not unlikely he would Sweat in a warm Bed, only by plunging in Water.

Of MELANCHOLY.

MY Opinion is, that Melancholy is a Degree of Madneſs, and that there are few that grow Mad, but they begin with being Melancholy.

Indeed there are ſome Diſtempers that may ſeize the Body with that Violence, as to make Perſons for the time raving Mad without Melancholy; ſuch as ſome raging Fevers, exceſſive Pain of the Head, or of the Cholick in the Bowels, or ſometimes the *Furor Uterinus*; and it may be ſome others, but then when the Diſtemper is cured, or goes off, the Madneſs ceaſes of it ſelf, and goes off with it.

But generally People are ſunk deep into Melancholy before they grow mad. And I believe Water uſed outwardly, or inwardly, or both, is good for all thoſe Diſtempers that ſeize the Body with that Violence, as to make People for the preſent mad.

I know to drink Water in a good Quantity, and waſh the Head often with it, rubbing

rubbing it dry every time you waſh it, will ſooner cure any grievous Head-ach, than any of thoſe Medicinal Courſes that are commonly uſed for the Cure of it.

I have large Experience of my ſelf, and others, that cold Water taken in Bed, or out of Bed, with Motion after it, will ſeldom fail to cure the worſt of Cholicks. And I verily believe (as I may perhaps ſhew in another place) that Water plentifully taken is the beſt Cure for the *Furor Uterinus*, and for thoſe Men that are too much inclined to Venery.

If then Melancholy be a Degree of Madneſs, and tends to it, and often ends in it; what is good for Madneſs, can hardly be bad for Melancholy. Only it is the Opinion of ſome good Phyſicians, that much Bleeding, or violent Purging, is not good in that Caſe. Dr. *Willis* ſays, he has always obſerved, that melancholy People were worſe after Purging.

But that Water is good for melancholy People (at leaſt ſo far as it depends upon any bodily Diſtemper) is the Opinion of many good Phyſicians, as I ſhall now ſhew.

Galen de loc. affec. cap. 7. ſays, He hath often cured melancholy People, at leaſt in the beginning, with only bathing in common Water. *Jonſton* ſays, That

Bathing in common Water is not to be neglected. *Waldſchmidt* commends the Mineral Waters, eſpecially the *Acidulæ*. Dr. *Willis* the Steel Waters, to open and waſh the Veſſels. But the Queſtion here is, Whether it be the Water or the Mineral that does them moſt good? And whether, if they drank common Water as much, and as long, it would not be the ſame thing.

Dr. *Mead* in his Diſcourſe of the *mad Dog*, having from ſeveral Authorities recommended the plunging in cold Water as the beſt and only Cure for that Poiſon, digreſſes a little to tell us, That *Valhelmont* commends cold Bathing in all ſorts of Madneſs, and that he mentions one Dr. *Richardſon* that did great Cures with it. And that among the Antients it was a common Cure for Melancholy. And cites *Proſper Alpinus*, who, he ſays, tells us, the *Egyptians* commonly cure Melancholy with warm Baths; I know not but that may do, but I ſhould think cold Bathing better, going to Bed after it. I would add to this, the drinking of a pretty deal of Water for ſome time, eſpecially when the Melancholy is upon them.

I knew a Gentlewoman, who died not long ago (who had great Misfortunes in her Family, and was very often Melancholy)

choly) ſhe has ſaid to many, that ſhe never found any Thing that gave her ſuch preſent Eaſe and Relief, in a Fit of Melancholy, as a Glaſs of cold Water.

'Tis certainly good to promote Circulation, which the Blood very much needs at that time, and to keep the Head cool, and prevent the Brain from receiving Harm from the intenſe, thinking on that one thing that is the Cauſe of their Fear and Sorrow.

'Tis certainly a good Corrector and Abſorber of that Acid, which all Phyſicians ſay conſtitutes the melancholy Temper of the Body, and inclines to Melancholy. Sir *John Colebatch* ſome where ſays, there are Alcalies, Acids, and Neutrals in Medicine; now Water, I think, is one of thoſe innocent Neutrals, that will imbibe, abſorbe, or correct both Alcalious and acid Salts.

Water is as certainly a great Aperient, and conſequently muſt be good for thoſe Obſtructions in the Hypochondria, the Spleen, Liver, Pancreas, Meſentery, which all Phyſicians ſay are the Cauſe of Melancholy. And whatever ſome may ſay of common Water not paſſing ſo well as the Mineral will, I know by long Experience, upon frequent Trials, the contrary, and that common Water will paſs as ſoon, and

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as well, and will cauſe as much Urine as the Mineral Waters will ; and thoſe that ſay or think the contrary have not tried it as I have done. And therefore I cannot but be of Opinion, that common Water, if drank as long, and as much of it, will do all that moſt, if not all the common Mineral Waters will do.

And, as I have ſaid before, I know by Experience, that Water plentifully drank, without any other Medicine, will cure any ordinary Jaundice, if taken in time, and before it be gone too far. And therefore, if I were now to enter into a Courſe of Steel, I would by Way of Preparation drink a deal of Water three or four Days before ; and ſhould chuſe that Method before Purging, as I think is the uſual Method. For thoſe volatile Salts which are ſo much commended for opening Hypochondriack Obſtructions, will operate more eaſily and effectually when the Blood is well diluted by Water, than they can do without it ; and Purging before it will be, I think, ſo far from helping, that it will hinder their Operation. For when the groſs Excrements are drawn off by Stool, the firſt Operation that purging Medicines have upon the Blood, is, that they draw off the moſt liquid and ſerous Part of it, and conſequently will

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leave the Hypochondriack Obſtructions harder to be opened by Steel, or any other Aperients, for all purging Medicines as to the Blood are, I think, firſt Hydragoges.

Hitherto I have treated of Melancholy upon the common Suppoſition, that it depends almoſt wholly upon the Diſpoſition of the Body, either the Indiſpoſition of the Head, or ſome other Part of the Body, chiefly the Hypochondria, the Spleen, Liver, Pancreas, or Sweet-bread, the *Omentum* or Meſentery, or the Womb in Women.

I confeſs I am quite of another Opinion, that Melancholy begins firſt at the Spirit or Soul, and that it is our fixing our Thoughts wholly upon ſome one thing, that more than ordinarily affects us, that is generally the Original Cauſe of Melancholy.

And this was the Opinion of *Hippocrates*, and ſome of the antient Phyſicians, as may be ſeen in their Works. And *Sylvius*, a late great Phyſician, ſeems to be of the ſame Mind. Now thoſe that write of Melancholy, ſeem to me at leaſt not to have well adjuſted this Matter, nor to have well ſettled the Limits and Bounds between the Soul and Body as to their Influence in this Diſtemper. They

are not very well agreed with themſelves; ſometimes they ſay ſuch Things as ſeem to allow the Soul hath a great Share in this Malady, but in their Diagnoſticks and Methods of Cure they ſeem to lay all the Load on the poor innocent and paſſive Body; wherein, I think, they wrong it very much. That the Soul operates upon the Body, and the Body in its turn upon the Soul ſeems to be pretty certain, and that the moſt common Operation of both upon one another, is, in, or ſomewhere about the Brain, may, I think, be taken for granted; but by what Means or Motions, and how they act upon and influence one another, I believe we ſhall not underſtand till we know the true Reaſon and Nature of the Conjunction of the Soul and Body, and what are the ſeveral Parts of the Fluids and Solids in the Acts of Senſe, Imagination, Memory, Underſtanding, and Reaſon, *&c.* and conſequently what Variations there are in *Deliriums*, &c. We hear a deal of Tattle of the Animal Spirits, and one ſays, *Cum levitær Pulſantur*, when the Filaments are gently touch'd by them, then all is right. The Muſick is fine, and Senſe, Reaſon, *&c.* is right, but when *Durius*, then we are Delirious; but then the Filaments muſt be well tuned, as the Ani-

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mal Spirits muſt be ſmooth and eaſy; no doubt we are mightily helped by this Alluſion, to a well tuned Inſtrument. We are juſt where we were before, when all is right, all is right that's plain.

We are told by almoſt all Phyſicians, that the Animal Spirits, which are ſuppoſed to be the great Inſtruments of Imagination, Reaſon, &c. ought to be *tenues*, *lucidi mobiles*, &c. (we ſuppoſe the Solids too muſt be in good Order.) But when this black Devil of the *Bilis Atra* is got into the Head, then they are *fixi tenebricoſi viſcoſi*, and what not; and preſent *Phantaſmata tenebricoſa & terribilia* to the Soul, for nothing is more dreadful than Darkneſs. This Account is come down from *Galen*, without Exception, as far as I have found, even to Dr. *Willis* himſelf, and is to me as dark as the Phantaſms themſelves. For generally there is but one black and frightful Phantaſm in melancholy People. The other Phantaſms are as white as they uſed to be, unleſs they be ſunk very deep even to Madneſs, they can reaſon like other People. I am ſure I have in my time viſited a good Number of them, and unleſs they were come to the *Melancholia Attonita*, to be like People aſtoniſh'd or Thunder-ſtruck (I never ſaw any ſuch) when they were

preſt in Diſcourſe, they could ſhift off an Argument as well as I could do. And Phyſicians obſerve, they are generally the moſt ingenious ſort of People, for Fools and Ideots are ſeldom Melancholy; they have not Reaſon enough to make them capable of it.

I fancy this thick, ſtubborn, and ſour Humour ſeldom travails at leaſt in its native Colour ſo far as the Head, it may taint the Blood with ſome corrupt Particles that may hurt the Head; but it keeps in the lower Parts, and either kills the Patient, or is voided by ſome of the excretory Veſſels, as I have ſeen it by the Lungs in the black Jaundice. I have read, that the Brains of Melancholy, and mad People, when opened, are very yellow, hard, and dry, but not of their being black. One would wonder ſo dark a Notion ſhould laſt ſo long, for I find none but *Bellini* rejects it. As far as I can judge, there is a ſort of ſtubborn, ſullen Anger and Rage in melancholy People, and that till it be gone very far, it is not want of Reaſon, but good Humour, that makes them ſo backward to take good Advice from their Phyſician, or others, in order to their Cure. They ſeem reſolved, becauſe they cannot have what they would, they will enjoy nothing they have.

Upon

Upon my Hypotheſis, the Matter ſeems to ſtand thus: That (the Soul being a thinking Subſtance) Men will be apt to pore and fix their Thoughts upon thoſe Things they ſet an high Value upon, they want, or have loſt, or are diſappointed of; that their continual thinking of ſuch Things, whatever they are, may, and in time, will diſorder their Brains, dry up the Liquid of the Nerves, or the Animal Spirits, and at length affect the Solids, or the infinitely ſmall Veſſels or Filaments in and about the Brain, that this diſorder of the Head will not only hinder the due influx of the Liquid Juice, or Animal Spirits into the Nerves, and make them too dry, but affect the Blood, and make it too hot, dry, and viſcous, and conſequently make it unfit for a regular Circulation; that the Blood being thus unfit for a regular and eaſy Circulation, will ſtagnate in the minute Arteries, and leſſen Perſpiration, but chiefly in thoſe of the Hypochondria, the Spleen, Liver, Pancreas, *Omentum* and Meſentery; ſo that only the more ſerous or watery Parts of the Blood will paſs thoſe Veſſels, that the more ſolid, earthy, and oily Parts of the Blood being mixt with the Serum, that remains will be unfit for Circulation, and ſtagnating yet more will

beget Obſtructions, if not Schirus's in thoſe Parts, where there are ſuch an infinite Number of ſmall Arteries and Veins bound and wound up together in ſmall Kernels, or Conglobated, or conglomerated Glands, with infinite Directions to and fro, that theſe will give either ſuch a ſcorbutick Taint to the whole Blood by Degrees, as will produce all or moſt of the Symptoms of a dangerous Scurvey, or will hinder the due Secretion of the Bile, and its Influx into the Bowels; and conſequently it will return into the Blood, and end in a no leſs dangerous Diſtemper call'd the *Jaundice*. Moſt Phyſicians that I have read, allow this may be done, and ſometimes is ſo; and therefore they divide Melancholy into Cephalick and Hypochondriack.

The Cephalick is, when the Head is firſt affected, and that affects the Hypochondria. The Hypochondriack is, when the Hypochondria are firſt affected, and they affect the Head. But they tell us nothing of the true Cauſe of the Diſorders of the Head, *i. e.* the Soul.

Though what I have now ſaid be poſſible plauſible, and, I believe, true, and in effect granted by the Writers in Phyſick; yet there is a nearer Way whereby Melancholy beginning in the Head, may,

and

and I believe, does beget Obſtructions in the Hypochondria, and which no Author mentions as far as I know, and that is the want of due, regular, and free Reſpiration in the Lungs.

Nothing can be plainer, than that intenſe thinking is always joined with the neglect and want of due, free, and full Reſpiration in the Lungs.

This is the Caſe of hard Students, who read, write, and think much, eſpecially if they ſit much, and do not ſit as erect as they can, but lean much over their Breaſt, and unleſs they uſe much Exerciſe by Riding or Walking, or other innocent Recreations, and allow themſelves convenient Intermiſſions of their Studies for Converſation; if not, they will in ſome time grow Hypochondriack, tho' not perhaps Melancholy. But if they continue this Courſe to an advanced Age, without undertaking Buſineſs, when they find how little Satisfaction they have in all their Reading and Thinking, and that there is hardly any Point in Divinity, or Philoſophy, or any Science, that can be by the beſt Scholar, or the moſt ingenious Man ſo cleared up, but that another Man as learned and ingenious as himſelf may ſo involve it (as it is the Deſign of moſt Controvertiſts to do) that the Verdict

dict ſhall be given againſt them in their Appeal to Mankind, at leaſt by the weak and ignorant, or the partial and prejudiced, and Party-men, who always are and always will be the greateſt Number of Mankind. I ſay, when they find this is the Caſe, they will grow melancholy and ſtupid, or will throw up their Studies, and turn Sots in their own Defence for want of ſomething to do. Or if they happen then to be called to Buſineſs, they will not be half ſo fit for it as they were perhaps twenty Years before.

And the Caſe is the ſame with the poor melancholy Creatures, when (beſide the Native Vanity, Fickleneſs, and Uncertainty of their own weak and wavering Minds) they are made uneaſy by Diſappointments and croſs Accidents, and do nothing but pore and think upon their Misfortunes, with Grief for what is paſt, and Fear about what is to come, and retire, hate Buſineſs, Company, and Converſation ; they will never Breathe freely, unleſs it be with now and then a deep Sigh, crying, O God! without one Word more, ſomething like one of the laſt Gaſps of a dying Man, and what Influence that is like to have upon perhaps a crazy and ſickly Body, we may eaſily gueſs.

'Tis plain, the Lungs are the Bellows that help to keep the Fire of Life alive.

What is the Influence Reſpiration has upon the Blood, the whole Maſs of which paſſes through the Lungs, before it enters the left Ventricle of the Heart, whether by comminuting it, or cooling it, is not neceſſary to enquire here; but rather, what influence the Motion of the Lungs may have upon the Hypochondria, and what effects a want of a due and full Reſpiration may produce there.

We find we cannot be a Minute without ſomething of Reſpiration, but we are in Danger of Suffocation; certainly then, when this is for a long time together done as we ſay by halves, it muſt have bad Effects upon the Conſtitution. For my part, I cannot but think the Lungs by preſſing down the Midriff upon the Hypochondria, and the Midriff upon Expiration, returning by its Elaſticity, and drawing them back again, and ſo keeping the whole Abdomen or Belly in a conſtant Motion, has great Influence upon the Circulation of the Blood through all Parts of the Hypochondria, and particularly upon Concoction in the Stomach, and perhaps the whole periſtaltick Motion of the Stomach and Bowels; and if that be true, the want of it will ſoon have

have bad Effects upon thoſe Parts. And conſequently, tho' Melancholy begin in the Head, yet the want of due Reſpiration which always attends it, will ſoon bring ill Diſpoſitions and Obſtructions in the Hypochondria.

Thus we have ſeen, that Obſtructions may ariſe from Melancholy beginning in the Head; let us now ſee whence thoſe Indiſpoſitions in the Head ariſe.

Sennertus tells us, this melancholy Conſtitution and Diſpoſition of the Brain, that changes and makes the Blood like it ſelf, is brought by Sadneſs, Grief, immoderate Mourning, from a long Sollicitude of the Mind about the Loſs of ſomething that is dear to us, as of our Parents, Children, Friends, Money, Goods, Honour, Reputation, or in the more generous Minds, from Modeſty and Grief about ſome perhaps light Miſtake we have been guilty of, or unjuſt Slander caſt upon us, or from Envy, Hatred, deſire of Revenge, Jealouſy, or in general from the vehement Deſire of any thing we cannot obtain, or are diſappointed of, or in, or from the vehement Love and Grief for any Thing we have loſt and cannot retrieve.

Now it's plain, theſe are all Paſſions, Affections, and Reſentments of the Mind, and if the Mind could throw off its

Thoughts

Thoughts of the Occaſions of them would never affect the Body at all.

Indeed he ſpeaks juſt before of a melancholy Humour gathered in the Head (which I much doubt of) but if there be any ſuch Thing, the uneaſy Thoughts of the Mind are the Cauſe of it.

But that we may make this further appear, let us conſider a little the ſeveral ſorts of Melancholy mentioned in Authors.

There is, ſay they, a Melancholy *per conſentum cordis*, by conſent of the Heart. This is but a Conſequence of the other, when melancholy Thoughts upon ſuch Occaſions as are juſt now mentioned have affected the Brain, corrupted the Blood and Animal Spirits (which moſt now ſay are the Cauſe of the Heart's Motion) and theſe flow irregularly to it, the Heart muſt be affected, and conſent whether it will or no.

They talk of a Melancholy *per conſenſum totius*, by conſent of the whole Body; that is, when the whole Blood is tainted with the melancholy Humour. This I am ſatisfied is not always the *Bilis Atra*, but any other Humour. I have known thoſe that upon ſome Diſgrace or Diſappointment, have with mere Vexation, fallen into violent Fevers, and thoſe

Fevers are generally the moſt malignant of any.

What ſhall we think of the Love-ſick Melancholy, does that come from the Body to the Mind, or the Mind to the Body? If the ſilly Love-ſick Creature would throw his admired Object out of his Mind, his Body would ſoon be well. Authors ſpeak likewiſe of a ſort of Melancholy they call *Melancholia Errabunda*, called by the *Arabians Kutubuth*, called ſo as they tell us from an Inſect that runs with incredible Swiftneſs upon the Water, with infinite Directions of its Motions. This, if there be any ſuch Thing, is nothing but ſuch an hurry of Thought as makes a Man not know where he is, or what he does, or did the laſt Moment, or is to do the next, and makes a Man always moving from place to place.

A Degree of this we may obſerve in ſome old People, that have been uſed to be over careful and ſollicitous, and their Care and Weakneſs increaſing with their Age, they are apt to be always in a hurry in going about their Buſineſs; and in moſt People, when they are to go a Journey, and have a great many Things to procure, they are apt to be in an hurry, which rather hinders than helps their Diſpatch, for their Thoughts are ſo quick,

that

that they make no Impreſſion on their Memories, and they forget as faſt as they remember what they are to do.

The laſt is *Melancholia ex utero*, Melancholy from the Womb; I very much queſtion, whether this be ever the immediate Cauſe of Melancholy, without the Intervention of ſome of the fore-mentioned Occaſions of Melancholy fixing upon the Mind, and ſinking it into Melancholy. But this is thought to affect the Head, and cauſe Melancholy, either as it begets Obſtructions in the Hypochondria, or at leaſt in the ſame Way thoſe Obſtructions do it, and ſo I need ſay no more of it.

Thus I have ſhewn, that Obſtructions in the Hypochondria may come from Melancholy beginning in the Mind, and diſordering firſt the Head, and then the Body, and begetting Obſtructions in the Hypochondria, and that all other ſorts of Melancholy mentioned by Phyſicians lie in the Mind affecting the Head and Brain.

Now then I muſt ſhew, that there is no Cauſe why we ſhould aſcribe Melancholy to the Obſtructions of the Hypochondria.

1. I have proved before, that Melancholy is a Diſeaſe of the Mind, and not of the Body, and therefore not to be imputed to Obſtructions in the Hypochondria.

2. That the firſt Indiſpoſition of the Body in Melancholy, is in the Head, not in the lower Parts of the Body.

3. That Melancholy will in time produce Obſtructions in the Hypochondria; and when both are found together, it will be hard to know upon the common Hypotheſis, which is the Cauſe of the other, without a nice Enquiry into the Beginning and Progreſs of the Diſeaſe.

4. That there may be Melancholy without any Obſtructions in the Hypochondria, or any other Diſtemper of the Body at leaſt for ſome time, till Melancholy have produced bad Effects in the Body.

5. For ought I know there may be as much Reaſon to Sir-name ſome other Diſtempers by Melancholy, as thoſe of the Hypochondria; there may be Arthritick Melancholy, Rheumatick Melancholy, Nephritick Melancholy, as well as Hypochondriack Melancholy; and where Melancholy and Obſtructions are together, they ought rather to be called Melancholy, Hypochondriacks, *&c.*

6. But that which is more than all is, That it is moſt certain, that there are often great Obſtructions, where there neither was, is, nor will be Melancholy. If they did indeed mean by Melancholy, ſome Degree of Uneaſineſs, Hypochondri-

ack

ack Obſtructions may cauſe that Melancholy, but ſo will any grievous Pain or Diſeaſe; the Stone, the Gout, the Rheumatiſm, the Cholick, will make us more uneaſy than Hypochondriack Obſtructions.

That this is ſo, is plain, from two Diſtempers that every one will own proceed from Obſtructions in the Hypochondria, the Jaundice, and Scurvy.

As to the Jaundice, I have ſaid before, I have had that Diſtemper frequently, from four Years old till above threeſcore; and I can truly ſay, I never was more melancholy under that than any other Diſtemper, tho' I have often had it to a dangerous Degree. The Reaſon was, becauſe I never ſuffered myſelf to think intenſely of any Thing while under that Diſtemper; for I had ſo much Wit as to think that would make me much worſe. Whereas (eſpecially when I was young, and before I came to undertake Buſineſs) I have many a time thought myſelf into ſo deep a Melancholy that I could ſcarely breathe. Not being ſo much inclined to Play as other Children are, (tho' I think it had been better for me I had) I took a particular Pleaſure, when I had nothing of School-

Buſineſs,

Buſineſs, in ſauntering up and down in the Fields and Woods, and when I had brought myſelf to that Paſs (as I often did) that I could hardly breathe, I generally had the Diſcretion to reflect a little on my Folly, and walked Home upon the full Stretch of a Foot Pace, and was as well before I got Home, as any one could well be. This was very often my Caſe, when I was as well in Health as ever I was in my Life.

I would not trouble the World with ſo much of my own Story, but that I think it very pertinent to the Caſe in Hand. We ſee, one may think himſelf into Melancholy when he has none of the common Occaſions of it, and much more, when he is under ſome great Misfortunes, which will be apt to fix upon his Mind, and be the Cauſe of it. That Melancholy proceeds no more from Hypochondriack Obſtructions than it does from other great and painful Diſtempers. That a Man may be melancholy without theſe Obſtructions, and that tho' he is under Hypochondriack Obſtructions he may be free from Melancholy, as appears from the Caſe of the Jaundice, which is certainly a Hypochondriack Diſtemper.

The ſecond Diſtemper I mentioned that makes it evident, that a Man may ſometimes be free from Melancholy tho' he have in an high Degree thoſe Hypochondriack Obſtructions, is the Scurvy.

The Scurvy is counted by all Phyſicians an Hypochondriack Diſtemper. Now do not we every Day in Company ſee Men that have it in an high Degree, that are ſunk deep into it, are almoſt eaten up with it, that can hardly walk over a Room, that yet have no Symptoms of Melancholy upon them, that do not retire, and think, and pore, and hate all Company, that take their Pot and their Pipe, or talk over the News, over a Diſh of Coffee, like other People; only it is not to be expected they can be ſo eaſy as others that are perfectly well.

By what I have ſaid, any one may ſee what my Opinion is of Melancholy, that it is not to be cured by Phyſick, for it begins, and lies chiefly in the Mind, and not in the Body, but only by the bad Conſequences that follow upon the Fear, Sorrow, and uneaſy Thoughts of the Mind, fixing itſelf upon ſomething or other that is the Occaſion of ſuch troubleſome Thoughts. When by the fixt

Thinking,

Thinking, and long poring of the Mind the Body is disordered, the Brain disturbed, the Spirits damped, the Blood soured, and perhaps great Obstructions formed in the Hypochondria, or some other Parts of the Body, there may be occasion for Physick, not to cure the Mind, for that will never be done by Physick, but to cure the mischievous Consequences in the Body, that come from the melancholy Thoughts of the Mind, or to prevent the further Progress of them. For this, common Water, I think, is one of the best Things that can be taken, as it promotes Perspiration, regular Respiration, the due Circulation, and corrects the Acidities and Sourness of the Blood, and keeps it from stagnating in any Part of the Body. And now I am commending Water (and so many Physicians have thought that cold Bathing is good for Melancholy) if we could send the poor melancholy Fool to the River *Lethe*, and duck him over Head and Ears in it, which the Poets fancied or feigned made the Soul forget all its former Life, and what it thought or did in it, and fitted it for Transmigration, and to begin a new Life in a new Body, something might be done. The Moral is easy; I will not speak of Christian

Conside-

Conſiderations taken from God and another World, tho' theſe are the very beſt Cure for Melancholy, if duely applied, yet they are as hard to be taken by the Mind, as ſome other Phyſick is by the Body.

There is a Quinteſſence extracted by the antient Phyſicians, of the Mind the Moraliſts, that might do much if rightly taken. You may find it in *Epictetus*, that a wiſe Man ſhould diſtinguiſh between the *ta eph Hemm*, and the *ta ouk eph Hemin*, Things that are, and Things that are not in our own Power. 'Tis to no Purpoſe to trouble our ſelves at what we cannot help, and that which cannot be helped muſt be born. And when we are heavy-laden already, 'tis fooliſh by Melancholy to lay more load upon ourſelves. If a Man, when he has had ſome great Loſs or Diſappointment, ſhould fall to beating or bruiſing, cutting or wounding himſelf, you would wonder at him. And is not he a greater Fool that will for any Thing of that Kind, cut, wound, and tear his Mind, for Days, and Weeks, and it may be Years together by continually thinking and poring on his Misfortunes. Any one that looks abroad into the World may eaſily ſee, that Kings, Princes, Nobles,

bles, the great, the rich, the wise, the learned, all Men, without Exception, meet with Occasions enough to be melancholy, if they will yield to it. And indeed, more of those are melancholy, than of the meaner Sort of People, in Proportion to the Number of them. Man is born to Trouble, the Occasions of Trouble, sufficient unto the Day is the Evil thereof. *Stupet hæc qui jam post Terga reliquit sexaginta Annos.* A Man that has lived sixty Years cannot wonder at any Thing; nay, six Years may convince him if he has his Reason about him, and ever reflects at all.

Now, what should a wise Man do in such a World as this is? Why, even let the World go as it will, and be what it was, and is, and ever will be, a vain uncertain Thing.

——*Omnia Fluminis*
Ritu feruntur, nunc medio alveo
Cum pace delabentis Hetruscum
In mare, nunc stirpes & lapides adesos
volventis una. Hor.

A Man may as well think to stop the *Thames* with his Thumb, as to stop the Course of this rapid World. 'Tis just as easy to alter the Course of the civil

civil and moral World, as it is that of the natural. And would be as great a Miracle to do it, as it was to make the Sun ſtand ſtill upon *Gibeon*, and the Moon in the Valley of *Ajalon*. When the great and good God will do this Miracle, he only knows.

Cur eternis minorem Conſiliis animum fatigas. Hor.

Why doſt thou attempt Things out of thy Reach, and trouble thy ſelf about what thou canſt not help. *Superanda omnis fortuna ferendo eſt.* Let us but get a quiet Mind, a patient Spirit, and the Maſtery over our own Thoughts, and we may defy the World. Let us amend ourſelves, and the World will be better, at leaſt, it will be ſo to us. If we could but cure our Pride, Covetouſneſs, Ambition, &c. we ſhould never be melancholy. We ſhould enjoy what we have, and never pine for what we cannot have. He that is to travel through a Wood full of Bears and Tigers, will think himſelf happy if he be not devoured, and however bad it may be with us, we may in ſuch a World thank God 'tis no worſe.

Well then is there nothing to be done with this dogged Malady, which is ſo juſtly, among ſome others, called *Opprobrium Medicorum*, the Diſgrace of Phyſick and Phyſicians. Yes, 'tis not impoſſible there may. If upon any ſuch Misfortune or Diſappointment as will be apt to ſtick cloſe to the Mind, and throw Men into Melancholy, they would have ſo much Senſe of God, and their Duty to him, and of Religion, and the Danger they themſelves are in, as to take up a ſtrong Reſolution to throw the unpleaſing Object out of their Minds, if they ſpring at once out of the Quagmire they are fallen into, and not by ſome imperfect Struggles ſink themſelves further into it. This is, I confeſs, hard, but not impoſſible. A few Thoughts will ſerve for this, if a brisk Reſolution follow upon them. But then, this muſt be done when they have their Reaſon free and clear, and before they are ſunk too deep into this bottomleſs Pit; otherwiſe, the more intenſely they think, the deeper they go. Much Reading, and much Thinking will never be their Cure, unleſs it be of ſuch Things as tend to divert their Minds with pleaſant Images, and ſuch as are very remote from that

one

one ſorrowful Object that occaſions their melancholy Thoughts.

There are a great many that have read and thought themſelves into Melancholy, but few I believe that have read and thought themſelves out of it. But then they muſt not wilfully refuſe to take the only Phyſick that will cure them, they muſt not retire, they muſt keep Company, admit Converſation, the pleaſanter the better, ſo it be innocent. They muſt uſe much Exerciſe, the more the better, ſo it be not above their Strength. And doing it moderately at firſt if they have not been uſed to it, they will be more and more able for it. Riding and Walking are both very good, Riding either in a Coach upon the Stones if they keep one, or on Horſeback is better to looſen the Parts, eſpecially in the Hypochondria and Bowels, if by Retirement, much Sitting, or uſing little Exerciſe, they cohere or ſtick together as the Lungs ſometimes do to the *Pleura*, or the Parts of the Hypochondria to one another. But then they muſt uſe both theſe in ſuch a Meaſure as will make it not eaſy to pore and think intenſely upon any Thing as they go along. And therefore ſauntering in the Fields, be the Air never ſo good, will do melancholy

People

People little or no Good, becauſe they may (eſpecially if alone) notwithſtanding that, pore and think themſelves into as deep a Melancholy as if they ſat alone in their Chamber. And therefore, the beſt Way is to fix their Point, and reſolve to walk to ſuch a Place and back again in ſo much Time (if they find their Strength will bear it) and keep their Mind upon obſerving their Time, and this will be ſome Diverſion from their melancholy Thoughts, and is much better than walking to and fro in their Houſe or Garden. And if they obſerve theſe Directions, Walking is much better than Riding for opening Obſtructions, becauſe it more quickens the Circulation of the Blood than Riding does, which is the only Means, without diluting, of opening Obſtructions which come only by ſome Degree of Stagnation.

And if I were to ride upon ſuch an Occaſion, I would not ride as is common, a ſmall Trot (which would not be inconſiſtent with fixed, poring, melancholy Thoughts, no more than ſauntering or gentle walking would be) but I would ride a good round Gallop for the moſt Part of four or five Miles, and reſting my ſelf a little (or it may be

be refreſhing my ſelf with a Draught of ſome warm Liquor, not too ſtrong) would ride back again with the ſame Speed. This would anſwer both Ends, would looſen the Parts, and very much quicken the Circulation of the Blood, taking Care not to catch Cold after it, as we muſt after Walking too. And this Speed in Riding would put by intenſe Thinking, and thereby give a Man ſome preſent Relief.

By this Method, I have when I was young carried off two or three Agues, and never had an Ague ſince; only taking Care not to do it till I was ſure it was an Ague, or at the Beginning of the ſecond Fit; for it is hard to diſtinguiſh by any Symptoms, at the Beginning, of what Kind the Fever will be, and if it ſhould prove a bad Fever, or the Small-Pox, ſuch violent Riding may do Hurt.

Theſe Diverſions, Converſation, and Exerciſe, are ſo neceſſary in the Cure of Melancholy, to divert the Mind from its uneaſy Thoughts, and take it off from its intenſe Thinking on the Cauſe of its Sorrows. That if I, who am no Phyſician, were worthy to adviſe thoſe that are, They ſhould never ſuffer their melancholy Patients to enter into any

Courſe

Courſe of Phyſick that requires long Confinement. For the Confinement (ſuppoſing they are not gone ſo far as to be unfit to be ventured abroad) will do them more Hurt than the Phyſick will do them Good. And particularly, not a Courſe of Steel, which, tho' in the Scurvy, Jaundice, &c. it may be very good, yet I think, ought not to be taken without ſome Caution, and that it will not bear much Exerciſe, as we find by Experience the Steel Waters, if we uſe violent Exerciſe after them, will fly into the Head, and do Hurt, which would be particularly bad for melancholy People, when, as I have proved before, the Head is firſt and primarily affected. Steel has indeed had large Encomiums given it by the lateſt and indeed the greateſt Phyſicians. One great Phyſician that I knew, ſaid, it was the beſt Medicine that ever God made. Another greater than he, as I have heard, being asked how long Steel might be taken, anſwered thirty Years. Well, let it be as good as it will to open Obſtructions, I believe ſome Aperients that will bear much Exerciſe will be as effectual as that, and perhaps much ſafer. And I need not go far for an aperitive Preſcription of my own. If any one will drink a Pint of common Water every

every Morning, and walk after it a Mile and back again, as faſt as his Strength, according as he has been more or leſs uſed to exerciſe will bear, and continue this plain and eaſy Method for twenty or thirty Days, the common Time for which a courſe of Steel is preſcribed, he will find it will be as effectual for opening Obſtructions as a courſe of Steel it ſelf. The Objection, that there are ſome cannot Walk is of no force. Let 'em but Walk a while as they can, and they will ſoon be able to Walk as they will. Walking is is ſaid to ſpend the Spirits, but Water, and Walking upon it, will ſoon bring the Blood to that temper, that it will ſupply more and better Spirits.

And I would recommend this both for the Jaundice, and the Scurvy. The Jaundice, I know, Water will Cure, if the Patient will either drink Water in a Morning, as before preſcribed, and Walk upon it, or drink nothing but Water for a few Days.

And if there be any bad Fever with the Jaundice, it is the ſureſt Remedy, for it will be hard to deal with the Jaundice, if you do not Cure the Fever. I have had my ſelf the Jaundice, with ſuch a Fever, that all the common Things that are taken for the

Jaundice, plainly did me hurt, and I had like to have died of it for want of applying my ſelf to Cure the Fever; and I am now ſatisfy'd, that if I had known the uſe of Water, and applied it then to Cure the Fever, I ſhould have been well in a Week's time. The common Things the hot Bitters and Dungs may by their volatile Salts open the Obſtructions, but by their Heat they increaſe the Fever, but Water taken in great Plenty will Cure both. Nay, even Saffron it ſelf, which is, it may be one of the moſt moderate Cordials and Strengtheners, cannot be good in that Caſe, when there is a pretty violent Fever, as ſometimes there is with the Jaundice. And I think few Phyſicians would in that Caſe preſcribe a courſe of Steel. I know this ſo well, by Experience, that I ſhall not trouble my ſelf to look into Authors about it, nor my Readers with giving any further Reaſons for it, but leave them to try it if they pleaſe. As to that Receipt for the Jaundice, Rhubarb powder'd, and beaten to a Pulp in Raiſins of the Sun ſtoned, and taken in a ſmall Quantity every Day, with which I have heard ſome would lay Wagers, they would Cure the Jaundice ſooner than with any other Medicine; I have tried it

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more than once, but found ſo much Trouble with Grumblings of my Bowels, and being neither Looſe nor Bound for a Week together, and ſo much Danger of taking Cold, by going out, as is permitted in that Caſe, that I cannot think it a convenient Method. And here I cannot but declare my diſlike of the Phyſicians, ſo often permitting their Patients to go out about Buſineſs with purging Phyſick, and I think it were much better to diſoblige their Patients for their good, than to oblige 'em to their hurt. And, I believe, they hereby make Work for themſelves, tho' they do not deſign it. For what for want of Things neceſſary to be taken upon Purging-Phyſick, Water-gruel, *&c.* there being as much need of ſome ſuch Things to carry off the Phyſick, as there is of the Phyſick to carry off the Humours, and what for their ſitting or ſtanding too long in the Cold, or drinking cold Things, *&c.* I think it were better they took no Phyſick at all, than to uſe that Liberty when they take it. Hereby others (I know it by Experience) who take Family Purges without the Advice of a Phyſician, are emboldned to uſe that Liberty to their Hurt, notwithſtanding they are not ſo able to judge when it may be ſafely done, as

a Phyſician can. I believe it firſt began in this great City, where there are ſo many in ſuch an hurry of Buſineſs, that they cannot well ſpare a Day to take Phyſick for their Health. And now I believe it is got all over the Kingdom. I have known many that have received Hurt by taking Cold this Way. Some, that to ſave one Day, have been forced to looſe a Month from Buſineſs. Nay, I have known a dangerous Salivation brought by taking Cold upon a gentle Purge, where the Liberty of going Abroad was granted. I ſuppoſe it might be a gentle Mercurial Purge. I dare ſay, a Man may ſafer go Abroad with a critical Looſeneſs that cauſes a dozen Stools in a Day, than with any Phyſical Purge that cauſes half that Number. The one diſturbs Nature, the other, if truly critical eaſes it. But to return, it may be convenient, if a Man cure his Jaundice by Water, to take a gentle Purge or two after to clear his Bowels, and to ſet Nature right in the due Secretion of the Bile.

As to the Scurvy, I cannot but believe, that Water taken in a Quantity, and continued as long as other Proceſſes are in that Diſtemper, with Exerciſe upon it, and particularly taking it every

ry Morning, with Walking or Riding after it, ſometimes the one, ſometimes the other, or Walking alone, if no convenience be had for the other, would be as effectual for the Cure of it, as any other Methods are, that are commonly uſed in that Diſtemper.

There are in Authors ſuch a large Train of frightful Symptoms, or indeed Diſeaſes that follow upon it, ſometimes more, ſometimes leſs, as may make any Phyſician afraid to venture upon it. So that it ſeems not ſo much a Diſtemper as a Diſpoſition of the Body and Blood for all Diſtempers. An univerſal Cacochymy, or Cachexy, 'tis made a Queſtion, whether the Antients knew any Thing of it. And certainly, in their warmer Climates it was not ſo common as among us at this Day; but *Hippocrates* deſcribes ſomething like it. It is almoſt peculiar to the *Northern* Countries, eſpecially in the Maritime Places. 'Tis too common here, not ſo much from the Neighbourhood of the Sea, as our plentiful Way of living, and indulging Exceſs in Meat and Drink, and notwithſtanding that few have it but thoſe that uſe little or no Exerciſe. Dr. *Pitcairne* ſays, it is *intima dimotio ſanguinis*, a Separation of the Parts (I ſuppoſe he means the Principles of the Blood) or *turbatio mixturæ ſanguinis*. And

And *Borhave* to the ſame Purpoſe ſays, it is when one Part of the Blood is too craſs and thick, and the other thin, ſalt, or acid. Both theſe Accounts ſuppoſe that the Parts, *i. e.* the Principles of which the Blood is compoſed are not duely mixt, but as it were ſeparated from one another. *Willis* diſtinguiſhes it into an hot and cold Scurvy, for what Reaſon I know not. The hot, as I remember, he calls ſalino, ſulphureous, or ſulphureo, ſalinous, as either of thoſe two Principles prevail in the Blood. But moſt Phyſicians agree that the Blood is univerſally tainted with a very malignant Acidity, which in Part coagulates the groſſer and more ſolid Parts of the Blood, and then the Serum muſt be ſeparate.

Moſt Phyſicians formerly thought, and many yet think, the Scurvy comes from great Obſtructions in the Hypochondria. The Bile being not duely ſeparated, mixt with the Earthy and Oily Parts of the Blood by long Stagnation in the ſeveral Parts of the Hypochondria, turns to that which they call the *Succus Melancholicus*, or black Choler. The Phyſicians diſtinguiſh this into Melas Chymos, or Melancholy, as it ſignifies one of the four Humours of the Body, which they ſay is the cauſe when

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too much increaſed of Melancholy, as it ſignifies a Diſeaſe, and *Melaina Chole Atrabilis*, or Black Choler, which comes from the Stagnation of the Blood, chiefly in the Hypochondria, and is the Corruption of the Blood, the Bile, and other Parts by Stagnation, and turns Black. I think I have Reaſon to believe, there is no ſuch Natural Humour in the Blood of an healthful Perſon, none but that which comes by Corruption of the Blood. To be ſure, there is as far as we know no conſtant Secretion of any ſuch Humour, as there is of the Bile and Phlegm. And therefore, if any ſuch Humour be the cauſe of Melancholy, it muſt be that which grows by the corruption of the Blood, by Stagnation in ſome Part of the Body, eſpecially in the Hypochondria. But this I have before ſhewed is not either the Procatarctick or Continent, the antecedent or immediate cauſe of Melancholy; the Melancholy of the Mind will cauſe this, but this ſeldom, if ever, cauſes the other.

As for the ſanguine Temperament. The Blood is improperly called an Humour, it being a Compound of all the Humours and other Principles of which it conſiſts, and therefore this Temperament can ſignify nothing, but either Fullneſs, Height, or Strength of Blood.

Blood. But the Blood, 'tis plain, will turn black or blackiſh upon ſeveral Occaſions. After deep and long Grief, if the Perſon be let Blood, his Blood will appear far from that florid Red that is natural to good Blood; this comes from the ſlow ſtagnating Circulation, that always attends great Grief, the Blood from the Piles is ſuch, and from the ſame cauſe. Upon a Bruiſe, if ſomething be not immediately done to keep the Blood in that Part fluid, and to prevent Stagnation, the Place will grow black; and ſo it is in the Jaundice, if it grow to what the Phyſicians for this Reaſon call the Black-Jaundice, which Humours I my ſelf have ſeen as Black as Ink.

Now I cannot but think, that drinking much Water, and particularly in a Morning, with Exerciſe after it, and at Night when we go to Bed, is very good to Cure the Scurvy, eſpecially if it be continued for ſome Time, and as long as other Courſes are that are preſcribed in that Diſtemper.

If the Scurvy be ſuppoſed to come from great Obſtructions, I believe, the drinking of Water will by degrees dilute the obſtructing Matter, and gently open the Paſſages of the Hypochondria. If it conſiſt, as the lateſt Phyſi-

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cians think, in ſuch a looſe Contexture of the Blood, as comes from the Want of a due Mixture of the Principles whereof the Blood conſiſts. I think, Water, which is the fineſt Liquid we have, taken in a Quantity, may dilute the groſſer Parts of the Blood, and fit them for a more equal Mixture with the Serum, after which, the Circulation will be more regular. Whereas they obſerve in a bad Scurvy the Pulſe is very irregular, ſometimes beats very high, and ſometimes very low, and the Blood hardly creeps along, as if the Patient had a malignant Fever.

As far I can think at preſent, there is no Cure for this morbid State of the Blood, but either by fuſing it or diluting it.

There is commonly, if not always an erratick Sort of Fever accompanies the Scurvy. If this were turned to a continual acute Fever, it would by raiſing the Circulation above the natural State, and the violent internal or boiling Motion of the Parts of the Blood, within themſelves, which would follow upon it. I ſay, it would fuſe the Blood, and break thoſe Concretions or Coagulations of the more ſolid Parts of the Blood, and at once dry up the acid

Serum, and reduce the Blood to a more equal and natural Mixture.

And if this Fever were (as it might be) cured by Water, and went off well, it might leave the Blood in a natural State, whereas it is known that an acute Fever, either continual or intermittent not well cured, often leaves the Blood in a ſcorbutick State.

But to put the Patient in ſuch a Fever in order to a Cure, is too dangerous an Experiment to be ventured upon.

And this in ſome Meaſure ſeems to be the Reaſon why Herbs that abound with volatile Salts, ſuch as Scurvy-graſs, Brooklime, Water Creſſes, Fumitory, and the like, are preſcribed in the Scurvy. The volatile Salts are thought by their quick Motion in a Manner to fuſe the Blood, and break its Concretions. And the beſt Way of taking them, as I have thought theſe fifty Years, and I find upon reading, that *Sennertus*, *Riverius*, and others think, is (when they can be had) to take the Juices of the Herbs themſelves, becauſe they think the volatile Salts evaporate by boiling them. Nay, they ſeem to think they do ſo by drying them for Winter (that I doubt of.) If not, they might

might (being carefully dried and kept) be taken by making a ſtrong Tea of them, and this muſt be much more effectual than any Spirits extracted by Diſtillation from thoſe Herbs, for there the volatile Salts will be gone, and only the more phlegmatick Parts of the Herb remain. I have often, when I was young, taken the Juices of theſe and other Herbs, according to the Intention I had. I pounded them well together. and putting a good deal of Water, or Wine, or Ale to them, ſtrained or percolated them thro' a cloſe woven Linen Cloth, and ſo took the Juice, and have often found great Benefit by ſo doing. And all Phyſicians ſeem now to be ſenſible of this when they have baniſhed all the ſimple diſtilled Waters (except ſome high Aromaticks) out of the Shops, and common Water, for boiling or taking Drops, *&c.* is come in the Room of them.

The other Way of curing the Scurvy, that ſeems moſt probable to me, is what I have already propoſed, diluting the Blood with plentiful Doſes of common Water.

And if they would condeſcend to drink nothing but Water for ſome Time (they may leave it off, or leſſen the Quantity, when, and as they pleaſe)

I believe it would be an effectual Cure. And this they might as ſafely drink as any other Liquor, notwithſtanding what the Phyſicians and Apothecaries ſuggeſt of the Danger of Water in ſeveral Caſes, and upon ſeveral Accounts, for this is the Burden of their Song in all their Anſwers to my Book. But this is nothing but meer Cant, for let them fix upon what Caſe they will, I think, I may ſay, I can make it appear, that either cold Water, or Water with a Toaſt in it, a little warmed, may be ſafely taken, without any Harm at all. And they do not uſe me well, when they ſeem to proceed upon a Suppoſition in all their Arguments, that I preſcribe none but cold Water, when I have in my Book ſo expreſsly ſaid, that when they are in a Sweat, or inclining to it, or for ſome Time after it, they are not to take cold Water, but if they take it, it muſt be taken with a Toaſt in it, and warmed to what Degree they pleaſe. I cannot but obſerve, that warm Water, within theſe three Years, is mightily cried up by many People, when we never heard a Word of it before. This is done in Oppoſition to my Book, and upon a falſe Suppoſition that I preſcribe none but cold Water, whereas I caution againſt cold Water

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in the only Caſe where there is any Danger in taking it.

I am fully ſatisfied both by Reaſon and long Experience, that it is the eaſieſt Liquid upon the Stomach in the World, and that cold Water for ordinary drinking, or for cauſing a Sweat, is much bettes than hot; and that all Danger may eaſily be avoided in any Caſe, by putting a Toaſt in it, and warming it a little, and that it is the beſt Ptiſan in any Fever whatever, better than Small-Beer, Sack-Whey, Small-Beer Poſſet-drink, Barley-Water, or any cooling Julep; and that in the whole Courſe of a Fever it may be as ſafely given cold (though that needs not) as any cooling Julep, or Pearl Cordial, which, I think, they do not uſe to drink warm. The Rich may uſe any thing they pleaſe. But I am thus poſitive in this, that I have ſaid (and will from the Experience I have ſtand to it) for the ſake of the Poor, who, if they can get good Water to drink, and good Water-gruel to eat, and will be content to keep in Bed a while, will generally do well enough in a Fever.

But to return to the Scurvy, Dr. *Strother*, who ſeems to be a learned and judicious Man, and I find is well eſteemed by the Faculty, he is ſo often cited among

mong other learned Men in a late Anſwer to *Febrifugum Magnum*. He, I ſay, in his *Eſſay on Sickneſs and Health*, fears not to commend Water or pure Element as the beſt drink for Scorbutick People, as he does in many Places for other Diſtempers. Indeed he with Dr. *Willis* diſtinguiſhes the Scurvy into hot and cold, and is poſitive that Water is good for the hot Scurvy, but not for the cold. I do not well know what they mean by an hot or cold Scurvy, whether they mean a Scurvy from hot or cold Cauſes, or with hot or cold Effects. I cannot ſee that Heat or Cold are much concerned as Cauſes in the Scurvy, which generally proceeds by Degrees from plentiful Living, and Want of Exerciſe, whence come Obſtructions, and ſuch a ſlow and heavy Circulation as is not ſufficient to keep the Blood in its due Craſis or Mixture. The ſame learned Doctor gives a large Catalogue of Indiſpoſitions or Diſeaſes, as Conſequents of the Scurvy, which though not all of them always (that cannot be, for they are ſome of them contrary to one another) but all of them one time or other attend it. (*Sennertus* reckons up no leſs than fifty-two of them.) Many of which, if it were a proper Place, I could

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ſhew, that Water taken as I have adviſed in the Scurvy, would either prevent or cure.

But enough for the preſent of the Scurvy.

To return now to Melancholy. I have treated briefly of the Jaundice, and the Scurvy, with Melancholy in this place, becauſe all theſe three Diſtempers are commonly ſuppoſed to come from Obſtructions in the Hypochondria.

The next Thing I would propoſe as a good Cure for Melancholy, is Buſineſs, ſo it be ſuch a Way, or if I may ſo call it, a Road of Buſineſs, as does not require intenſe Thinking, nor of ſo great Conſequence as to fill the Mind with too much Concern, Care, and Solicitude about it.

There are two ſorts of People that are ſeldom Melancholy, thoſe that think aright, and thoſe that we may in a Senſe ſay do not think at all. Of the firſt, there are but very few perhaps, not one in an hundred, of whatever Quality, Condition, or Circumſtances they be that have got the Government of their own Thoughts, or can bear Liberty and Leiſure of Thinking, though perhaps they be ſo Rich and Great that they cannot tell what they want, or what they could wiſh to have. Hence ſo many great Peo-

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ple, that if they did not give themſelves up wholly to Converſation and Diverſion, would for all their Riches and Greatneſs be a Burthen to themſelves. Hence it is we find ſo many rich Citizens, when they leave Buſineſs, and retire into the Country, are eaten up with their own Melancholy Thoughts, and know not what to do with themſelves; and ſome return and fly for Refuge to the Trade or Buſineſs they had left off. Whence it appears, that Diverſion is the beſt Cure of Melancholy, and Buſineſs is the beſt Diverſion; Buſineſs is a conſtant Diverſion to the Mind, but other Diverſions are but Occaſional. Therefore, they that have Buſineſs, if they would not be Melancholy, let them keep to it, and thoſe that have none, and have no need of it to live, let them make ſome to themſelves: If reading be no Diverſion, they may find ſeveral Employments not below a Man of Leiſure, and a Gentleman, as Husbandry, Gardening, Mechanicks, *&c.*

Hence it is, that the meaner Sort of People are ſo ſeldom Melancholy, they have generally ſo much Buſineſs, that they have no time to think of any thing but their Buſineſs, and not one Buſineſs in twenty but is when they are uſed to it a mere Road, and more a Diverſion (if

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their Minds close with it) than Walking, and doing nothing. And it may for ought I know, be happy for some such People that they have no time to think.

The Body is a Beast of Burden, that will bear any thing when it is by Degrees used to it. But the Mind of Man is a strange ravenous Creature, that if it be not constantly fed with Food it likes, will prey upon itself, and the Body too, and eat out its own Bowels. In short, we might live tolerably well almost any where, if we could leave ourselves behind us. But

Cælum non animum mutant qui trans mare currunt.
Et se non effugit unquam.

They really want nothing but a little Food and Raiment, and those generally are either had, or easily got. Our great Want is Contentment and a quiet Mind. *Quod petis, hic est—est ulubris site animus non deficit æquus.* We are either the best or worst Companions in the World for ourselves, and often when we might be as happy as the World can make us, we make ourselves miserable. And this is often the Case of Melancholy in all the Kinds

and Degrees of it. The Phyſicians define Melancholy to be *Delirium cum Metu & Triſtitia*, a Delirium with Fear and Sorrow. This is not altogether right, there may be a very deep Melancholy without any Delirium. Being delirious, does not lye in not acting according to Reaſon, but in not being capable of it.

Melancholy People might generally cure themſelves by a ſtrong Reſolution and innocent Diverſion or Buſineſs, if they were influenced either by Reaſon or Religion. But if they ſuffer it to go on, and grow upon them, it may in ſome Time be out of their Power to do it. There is an *Hyſteron Proteron* in this Definition; for tho' our melancholy Thoughts may add to our Fears and Sorrows, yet they are not the firſt Cauſe. Generally either Sorrow for what is paſt or preſent, or Fear about what is to come are the Cauſe of Melancholy; perhaps they may be fooliſh Fears and Sorrows, that's all one. Thus I knew a Man that had three thouſand Pounds a Year, he had got a Fear in his Mind that he ſhould want before he died. It fixed ſo upon his Mind, that he died of Melancholy, and the Caſe is the ſame of Sorrow. The moſt eſſential Part of Melancholy, as I have

I think,

I think proved, lies in the Mind, in our being always muſing and poring upon ſome one thing that has fallen croſs to us, or that we fear will come upon us, or that we are diſappointed of.

There is a lower Degree of Melancholy, that is commonly called the Hypo in Men, becauſe it is ſaid to come from Obſtructions in the Hypochondria, and is called the Vapours in Women, and is ſuppoſed to come from Obſtructions in the Womb, either the Stopping of the *Menſes*, or ſome Indiſpoſition in thoſe Parts. Hyſterick Fits are indeed ſad Things, and produce direful Effects, not only in the Head, but in the whole Body. But theſe have nothing to do with Vapours, nor can a few Vapours come from whence they will produce ſuch direful and dangerous Effects, either in Man or Woman. Tho' ſome old Phyſicians aſſigned them as the Cauſe, the later, wiſer, and better Phyſicians, and particularly Dr *Willis*, take no Notice of them, but look upon theſe Fits to be Convulſions, which tho', they may begin in the Hypochondria, or the Womb, affect the whole nervous Syſtem.

I have endeavoured to find not only whence the e Vapours come that are

ſaid to make People melancholy, but what Way they get into the Head, but can find nothing that ſatisfies me. *Riverius* is pretty large in telling us what Diſtempers they produce in the Head, but at laſt it appears he means Wind and Flatus's that riſe thro' the Bowels into the Stomach, and ſo into the Head.

Theſe Flatus's may indeed come out at the Mouth, but cannot get into the Head.

Fernelius ſays, they paſs by the Arteries and other Veſſels to the Head. But that is impoſſible, for if they be only Vapours, as they call them, that riſe either from the Womb, or the Hypochondria, they will be evaporated by the Heat of the Blood before they can reach the Head. Our lateſt Phyſicians ſeem to be ſenſible that this is a lame Account of Melancholy, and therefore neither *Bellini*, *Pitcairne*, *Boerhaave*, *Waldſmidht*, nor *Willis*, *&c.* ever ſo much as mention theſe Vapours, when they write of theſe Diſtempers. We find ſomething of them in the Primitive, and ſomething more in the later Antiquity, but the lateſt and beſt Writers give other Accounts of theſe Diſtempers. No Body doubts but Obſtructions in the Hypochondria, or in the Womb,

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by corrupting the Blood, may, and do bring ſeveral bad Diſtempers of the Head and Body too upon Men and Women, but Melancholy is no more begun or increaſed by them than it is by other Diſtempers. And therefore we muſt put this light Sort of Melancholy, call'd Hypo and Vapours, to the Account of the Mind too, for moſtly the Body is not much to blame. They that indulge theſe melancholy Thoughts, as a great many do, who have but ſmall Occaſion, will ſoon feel it in their Bodies, in Difficulty of Breathing, in low Spiritedneſs, and the ſlow and heavy Circulation of their Blood, and other bad Conſequents. And theſe Sorts of melancholy Fits will ſometimes ſeize the moſt healthful and happy People in the World, nor do I think there is any Man or Woman in the World that has not ſometimes theſe Vapours, if they muſt be called ſo. For my Part, I do not pretend to be wholly free from them, tho' I have had for this laſt dozen Years as good Health as any Man can well have. There is a certain Diſſatisfaction and Uneaſineſs attends the Mind of Man in every Condition, the Great as well as Mean, the Rich as well as Poor, the Wiſe and Learned as well as the Ignorant and Fooliſh. We

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lay Schemes, we contrive, and perhaps are diſappointed, then we grieve; perhaps ſucceed, ſtill we are not well at Eaſe, nor ever ſhall be while we are here.

Go level Hills, and fill up Seas,
Spare nought that may your wanton Fancy pleaſe,
But, truſt me, when you've done all this,
Much will be miſſing ſtill, and much will be amiſs. Cowley.

And I think there is hardly any Thing that gives the nicer Sort of People theſe Vapours oftner, than too much Care and Fear about Health. Health is a moſt valuable Thing, and when there is apparent Danger, we ought to ſend for the Phyſician in Time, but to be always fancying we are ſick, or fearing we ſhall be ſo, is the Way never to be well. And there are a great many People that would be well enough in Health, if they would but think they are ſo. And thoſe learned and ingenious Gentlemen that have lately wrote *de Sanitate tuenda*, Eſſays of Health, *&c.* when they lay down ſuch nice Rules about the Uſe of the Non-Naturals, as not one in a hundred can or will obſerve, give but too much Occaſion for this

this Melancholy in fanciful People. And thus I am fully ſatisfied, that this Hypo, theſe Vapours (as they are called) come from the Head, and do not aſcend to it, either from the Hypochondria, or the Womb. I have mentioned ſeveral of the greateſt Phyſicians that take no Notice of them, or if they do diſcard them. To which I might add, *Doleus* upon Melancholy laughs at them. And *Vanhelmont* calls theſe Vapours, this Account of Melancholy, *Aſylum Ignorantiæ Scholarum*, A Refuge for the Ignorance of the Schools.

So far then for Melancholy, the Jaundice, and Scurvy, which I have treated of together, becauſe they are ſuppoſed to come from the ſame Cauſe, Obſtructions in the Hypochondria.

Of the APOPLEXY.

AN Apoplexy is the Loſs of all Senſe (both internal and external) and Motion, except a feeble one of the Heart and Lungs. All agree the Part affected is the Brain, or ſome Part of it; ſome the Subſtance, others the Ventricles,

tricles, moſt the *Medulla oblongata*, ſome the *Meninges*, one or both the *pia & dura Mater*, or ſome Swelling, Abceſs, or Collection of Matter in the Cavity of the Brain.

Whatever therefore may obſtruct the Paſſages in or about the Brain, ſo as to hinder the Circulation of the Blood thro' the Brain, or the Paſſage of the Animal Spirits into the Nerves may be the immediate Cauſe of an Apoplexy.

There are other dangerous Diſtempers, that differ little from this, and are but ſeveral Degrees of it, the Coma, Lethargy, and Carus, only they generally come on more leiſurely, this generally more ſuddenly.

Sometimes this Diſtemper ſeizes the Patient on a ſudden, with that Violence, as takes away all Senſe and Motion, and Life together. Other Times in ſuch a Manner only as is conſiſtent with the Continuance of the Motion tho' weak, of the Heart and Lungs.

The Reaſon why the Heart continues its Motion, when all the other Muſcles by the Obſtruction of the Nerves ceaſe their Motion, as Dr. *Pitcairne* tells us, is becauſe the Heart has no Antagoniſt Muſcle, and conſequently a leſs

Quan-

Quantity of the *Liquidum Nervorum*, or Animal Spirits, is neceſſary to move that than the Muſcles that have Antagoniſts. For more Spirits muſt be conveyed to the Muſcle to be moved, than to its Antagoniſt, elſe there will be an Equilibrium, and no Motion at all.

It ſeems pleaſant to think there muſt be more Spirits to move a Muſcle of an Inch long (when it is under the Command of the Will too) than ſuch an one as the Heart, the Motion of which muſt be merely mechanical, not being under the Power of the Will either to move or ſtop its Motion. The Accounts that even the moſt mechanical Men give of theſe Things, are ſo dark, and preſt with ſo many Difficulties, that I am afraid, for all the Improvements of Philoſophy, we yet know but little of the true Mechaniſm of the Motion of the Heart, or the Muſcles either. But to let that paſs.

Apoplexies are commonly divided by Phyſicians into *Sanguinea & Pituitoſa*, into thoſe that come from the Stagnation of the Blood, or that come from Phlegm, or the Stagnation of a viſcid Serum, in the Paſſages in or about the Brain.

If therefore the Brain, or the Parts about it be ſtuffed with too much Blood,

either from a Plethora, or if the Equilibrium of the Blood in the aſcending and deſcending Trunk of the Aorta be altered, and the Blood turned too much through the aſcending Trunk to the Head, or if the Blood be too hot, and thick, and dry, and too much fuſed by that Heat, or if it be coagulated and clotted in any conſiderable Degree, it muſt and will preſs upon the Nerves of theſe Parts of the Head, and hinder the due Motion of the *Liquidum Nervorum*, or the Animal Spirits, and as there will be but few Animal Spirits in that Caſe ſeparated from the Blood, ſo thoſe that are, will partake of the Diſpoſition of the Blood, and be too viſcid, and unfit for Motion. Some of theſe may be, and are ſometimes the Cauſe of an Apoplexy, or of ſome of thoſe Diſtempers that are of the ſame Nature with it, and Degrees of it. And this may be called *Apoplexia ſanguinea*, or an Apoplexy cauſed by the Temper and Diſpoſition of the Blood.

There may be likewiſe an Apoplexia Pituitoſa, or an Apoplexy from too much and too viſcid Serum ſtagnating in or about the Brain. When there is upon ſome Occaſion (ſuppoſe upon the ſtopping of ſome of the natural Evacuations, Perſpiration, &c.) more Serum ſeparated from

from the Blood, then can circulate freely through the Lymphatick Veſſels which go along with the Arteries and Nerves in all Parts of the Body, the Head as well as other Parts, the Lympha will grow ſharp and viſcid, and may ſometimes fall in ſuch abundance upon the Head as to beget a Stagnation, and cauſe an Apoplexy or Carus, *&c.*

Now the Cauſe of the Apoplexy may lie either within or without the Veſſels. If within the Veſſels, if there be a total Stagnation of the Blood and Juices, 'tis ſudden Death, as is the Caſe of many who fall down dead in a Moment. If it be only a Stagnation that cauſes great difficulty of Circulation, it may take away Senſe and Motion without bringing ſudden Death, and then ſometimes by Degrees Nature may conquer it, and Art may be aſſiſting to it. Though *Hippocrates* ſays, a ſtrong Apoplexy is impoſſible to be cured, and a light one not eaſy. This holds true in both ſorts of Apoplexies.

But then ſometimes either the Blood or Serum may ſo ſtuff or diſtend the Veſſels (eſpecially when the Blood or Humours have by a partial Stagnation and ſlow Circulation contracted a preter-natural Acrimony or Acidity) that they break, and then there muſt be a Collec-

tion of the thinneſt Part of the Blood or Serum in the Cavity of the Brain, and that this is often the Caſe is plain from the Accounts we have in Authors of thoſe that have been opened after Death, where there have been found ſometimes extravaſated Blood, and ſometimes Water or Serum in the Cavity of the Brain, and ſuch Apoplexies all Phyſicians look upon to be Incurable, though I believe it is not to be known but by Inſpection after Death whether that be the Caſe or no.

Phyſicians further obſerve, that an Apoplexy, or any of the ſleepy Diſtempers may ſometimes ariſe from an Hydrocephale, or Dropſy of the Brain, being an Inundation of a thin Serum, or from a deep-rooted and very bad Scurvy, which is an univerſal Cachexy or Cacochymy of the Blood when its Principles are in a manner ſeparated, and the Mixture of the Blood is quite vitiated. And *Bellini* obſerves, that an Apoplexy does not always come from a Plethora or too great a Plenty of Blood, but ſome vitiated Quality therein, as in a bad Scurvy, nay, ſometimes from want of Blood, and then probably the Veſſels of the Brain ſubſide and grow together.

Some think the Apoplexy is hereditary in ſome Families, which if ſo, whether

ther it proceed from ſome hereditary Temperament, as ſome Fault in the Solids, or ſomething peculiar, in the Make of thoſe Parts of the Head, I leave the Phyſicians to determine.

I do not doubt theſe ſleepy Diſtempers, as alſo Periodical Head-Aches (which we find ſome can never get rid of while they live) ſometimes proceed from the Straitneſs and Narrowneſs of the Veſſels, and then certainly to drink plentifully of thin, innocent, diluting Liquids, which will both keep the Veſſels cool and moiſt, and apt to open, and by diluting the Humours make them more fit for an eaſy Circulation, muſt be good. And all hot and ſtrong Liquors, eſpecially if drank in any Quantity, will heat and dry thoſe ſmall Veſſels, and keep them too tenſe to open for the circulating Fluids.

Sometimes an Apoplexy may come from ſome Abceſs, or Humour about the Brain.

Sometimes theſe ſleepy Diſtempers come from the immoderate Uſe of Opiates.

The old Galeniſts aſcribe them to certain Vapours that riſe from ſome Parts of the Body, and cloud the Brain. But it is impoſſible that any ſuch Vapours ſhould ariſe from any Part of the Body,

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as can be a ſufficient Cauſe of ſo great Obſtructions, as are neceſſary to be the Cauſe of this Diſtemper, nor is there any Way for them to come at the Head but by the Circulation of the Blood. And therefore our later Phyſicians never aſſign theſe as the Cauſe of it. And tho' *Bellini* mentions them as aſſigned by others, yet he plainly ſhews he has no Opinion of them.

Theſe, and ſuch like, are the immediate Cauſes of this Diſtemper.

The Antecedent or more remote Cauſes are reckoned up by *Etmuller*. A violent Shake of the Brain. A Fall from ſome high Place. A great Stroke about the Ear, or upon the Eye. Being expoſed to ſudden and exceſſive Cold. A ſudden Suppreſſion of a violent Hemorhage. A Retention of the Lochia in Child-bearing. The Suppreſſion of the Menſes. Violent Paſſions, eſpecially that of Anger. The Striking in of the Small-Pox. The narcotick Fumes of Coals, eſpecially Charcoal in a cloſe Room, and of fermenting Wines. And thoſe that pleaſe to conſult him, may ſee he gives Inſtances of every one of theſe producing Apoplexies, out of eminent Authors, Phyſicians and Anatomiſts.

Sometimes

Sometimes the Cauſe of the Apoplexy hath by Anatomical Diſſections after Death, been found to be in the carotid Arteries, or the Jugulars.

As to the Cure of this Diſtemper, Phyſicians commonly preſcribe Blooding in the Arm, or in the Jugular Vein, or both. The ſtrongeſt Glyſters, Vomits, and Purges, which muſt be thoſe that will have the ſtrongeſt and quickeſt Operation, with the leaſt Quantity, and chiefly chymical ones. For the Caſe may be ſo that no great Quantity of any Thing can be got down, without a ſudden Suffocation.

It is the Obſervation of *Celſus*, *Si omnia Membra vehementer reſoluta ſunt Sanguinis Detractio, aut occidit aut liberat.* In a very bad Apoplexy, Blooding either kills or cures. And he adds a little after, if after Blooding, Senſe and Motion do not return, there is no Hope, if they return there is ſome Proſpect of Recovery,

Crato Conſil. 5. *lib.* 1. confirms *Celſus*'s Obſervation as certain. In the Beginning of an Apoplexy, ſays he, almoſt all let Blood ſpeedily, but *hoc certum eſt occidere miſſionem cum non liberat.* This is certain, that Blooding kills when it does not cure. I have always thought

that

that taking away ſo great Quantities of Blood as is done in ſome Diſtempers, cannot be good. And I have known many that after the Loſs of great Quantities of Blood, in Pleuriſies, Rheumatiſms, Aſthmas, *&c.* have been always infirm. And what is done to prevent the Effects of an acute Diſtemper, often brings a laſting Weakneſs, if not ſome Chronical Diſtemper.

And certainly when the Body is ſo weak, and ſo near Death, as in a bad Apoplexy, tho' Blooding may be neceſſary, when there is, as *Celſus* obſerves, no other Remedy when that fails, yet it muſt be done with a great deal of Hazard, and if it do not cure, muſt kill the Patient the ſooner. And therefore ſome Phyſicians adviſe not to take too much Blood at once, but to take the Quantity deſigned at ſeveral Times, and then it will be eaſier for the Blood to recover its Equilibrium. Dr. *Morgan* in his late ingenious Book, called, *Philoſophical Principles of Medicine*, has a good Diſcourſe of Blood-letting, the Reſult of which is, that in his Opinion there is nothing in the whole Compaſs of Phyſick, that requires a nicer Judgment of a skilful Phyſician, than when to let Blood, and when not. Whereas young Phyſicians, and moſt Patients, uſe

it

it with as much Freedom as they do their Meat and Drink.

All that is to be ſaid is, that in caſe of certain Death if nothing be done, it is better to do ſomething with ſome Hazard than nothing at all. They ſay indeed ſomething of the Weakneſs of the Patient, but that, ſay they, is to be judged of by his Strength before, not now. But I doubt of that, for how ſtrong ſoever the Patient might be before, when he lies under an Apoplexy, he is not abler to bear violent Phyſick, than when he is given up in a Fever, and the Phyſician dares not preſcribe any Thing farther. And therefore I am afraid, *Celſus*'s Obſervation, *Occidit ſi non Liberat*, if it do not cure it kills, may be applied to violent Vomits and Purges, and ſome other violent Methods under an Apoplexy, as well as to Blooding.

You may ſay, then what is to be done? I anſwer, I know not, nor ſometimes perhaps the beſt Phyſicians neither. The good Phyſician no doubt would willingly cure, but he would not willingly kill his dying Patient before his Time.

As to Vomits, *Sylvius* is againſt them, ſuppoſing that Vomiting cannot be provoked when the Nerves and Muſcles

of the Stomach and Midriff are void of Senſe and Motion. And it is certain, that they muſt be very ſtrong ones that will do any Thing to the Purpoſe, and that often they will not work at all, and the ſame may be ſaid of ſtrong Purges. But the great Query is, whether if it ſhould work violently, there may not be Danger of ſtopping the weak Remainders of Reſpiration and Circulation all at once. And there is another of no leſs Concern than that, whether if they do work they can draw off any thing conſiderable of the morbifick Matter from the Head, or give ſuch a Shake to the Veſſels of the Head, as to ſet the ſtagnating Humours in Motion, in order to opening the Obſtructions in that Part.

As to Glyſters, they muſt have a leſs powerful Operation, and as they will do leſs Hurt, ſo they muſt in this Caſe do leſs Good. Beſides that, the Nerves and Muſcles of the Anus, are often in this Caſe ſo reſolved, that no Glyſter can be retained ſo long as to do any Good.

Now I ſhould think, thoſe Medicines that are more immediately applied to the Head, ſuch as ſtrong bliſtering Plaiſters applied to the Neck and Head, ſtrong Sternutatories, Errhines, Apophlegmatiſms,

matiſms, *i. e.* Things that draw Phlegm and Water from the Head, Cupping, *&c.* ſhould have the moſt powerful Effects in this Caſe. I obſerve in reading Praxis's there is nothing ſo generally preſcribed and uſed as Caſtor, which I ſuppoſe is thought to have ſome Kind of Specifick Virtue in this Caſe.

The Intentions in this Diſtemper muſt be ſome of theſe.

1. To draw the Matter from the Head, or keep more from coming to it, and increaſing the Obſtructions. And this is the Deſign of all the Blooding, Vomiting, Purging, Glyſters, Bliſtering, and all the Methods that are commonly uſed in this Diſtemper. Tho' they very often ſignify very little.

2. Or ſo to prepare and alter the Blood, that it may be fit to circulate more eaſily, and break through the Obſtructions in the Brain.

And this muſt be done either by fuſing it or diluting it. By fuſing it, as it is in violent Fevers. This muſt be done by very hot and ſtrong Things. But I believe few Phyſicians would adventure to put a Man into a violent Fever to cure him of an Apoplexy. And yet, if *Hippocrates* and ſome other Phy-

ficians are right in their Obſervations, a Fever ſometimes cures an Apoplexy. *Hippocrates* obſerves that, *An Apoplectick Perſon dies in ſeven Days unleſs a Fever takes him.* And, *A ſtrong Fever in the Beginning may ſometimes diſcuſs the Humours. A ſlow one cannot do it.*

Bellini obſerves, that ſometimes a Fever comes along with an Apoplexy, and by the ſtrong and vivid Motion of the Blood, may remove the Obſtructions. According to *Hippocrates*, *If the Blood grow hot, and the Bile be ſeparated from it, they are cured.* And therefore ſome Authors obſerve, that if in an Apoplexy the Patient fall into a Phrenitis or Phrenſy, it may poſſibly be his Cure, becauſe that brings along with it a more ſwift and vivid Motion of the Blood, but I doubt in a very bad Apoplexy the Patient has not Senſe enough left to be capable of that Diſtemper.

Becauſe putting the Patientin a Fever (if it could be done) is too hazardous to be attempted, another Way of altering and preparing the Blood for a better Circulation, in order to its getting through the Brain, or the Parts about it, muſt be by diluting it. I take good wholſome common Water to

be

be the moſt proper Diluter, and if a good Quantity of Water could be by Degrees got down, without Danger of Suffocation, I believe it would give leſs Diſturbance, and perhaps have as good an Effect, even upon the Stomach and Bowels, as Vomiting and Purging. And I do not ſee that this would be more difficult than to give a Vomit or a Purge. Whatever of that Kind is given muſt be either ſomething liquid, or in a ſmall Quantity of ſome Liquid, it being impoſſible a Patient in that Condition, ſhould ſwallow any Thing that is ſolid, but in a Liquid; and certainly the very Coldneſs of the Water would do more to raiſe the Spirit, and to bring back Senſe, than throwing Water into his Face, which is done with that Deſign.

But then if ſuch a Quantity could be given, as by cooling and diluting the Blood, would put the Patient in a kindly Sweat, I am apt to believe it would be more effectual than all the other Methods put together. It would turn the Courſe of the noxious Humours another Way, it would, by thinning the Blood, fit it for a more eaſy Circulation. By thinning it, I do not mean fuſing it, ſo for Inſtance, Water-Gruel is thinner when it boils than

when

when it does not, and ſo the Blood in a Fever is thinner than in Health, becauſe it ſwells, and takes up more room. But I mean thinning it by adding more Liquids, as if you put more Water into boiling Water-Gruel, it thins it, tho' it takes off the Fuſion by Boiling, and makes it take up leſs room.

I doubt not but the ſame Cauſe, the ſame Diſpoſition in the Blood, may beget an Apoplexy or a Fever. If the Indiſpoſition, the Obſtructions lie chiefly in the Head, it may turn to an Apoplexy, or a Fevor, as it happens. If it turn to a Fever, it may prevent the Apoplexy, or if both are joined together, the Apoplexy may be more eaſily curable, as has been obſerved by many Phyſicians. If a Fever proceed from the ſtopping of the Pores of the Skin, the capillary Arteries are firſt affected, which is the Cauſe why ſo many Fevers begin with Cold and Shivering in the extream Parts, when the capillary Arteries are firſt affected, and the Circulation difficult in thoſe Parts, which is the Cauſe of thoſe Tremblings, and light Convulſions in the Extremities of the Arteries. And therefore what will cure a Fever (as I have by long Experience known that Water will) may help to cure an Apoplexy.

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The great Queſtion then is, whether the giving Water can be ſo managed without Danger of a ſudden Suffocation, as that enough may be given to produce a Sweat, if it can, I ſhould not much doubt it would be as likely to ſucceed, as any of the Methods that are commonly taken in that Caſe.

But becauſe that is uncertain, and depends upon the Degrees of the Apoplexy, I ſhall not inſiſt farther upon it.

But I think I may preſume to recommend the drinking of Water in ſome Quantity every Day, and particularly in a Morning, and before we go to Bed, and half an Hour or an Hour after Dinner, as the beſt Preſervative or Prophulactick againſt Apoplexies, as well as it is againſt Fevers.

I will add one Thing further, that thoſe that have had one Fit of an Apoplexy, and eſcaped, ought upon every Indiſpoſition, eſpecially in the Head, to be apprehenſive of ill Conſequences, and I am apt to believe, if, when they find themſelves indiſpoſed, they would drink a deal of Water, or be content to drink only Water for a Day or two, eating ſparingly of Things eaſy of Digeſtion, it would prevent a ſecond Fit for that Time.

It may perhaps be ſaid, this Account may be tolerable when the Apoplexy proceeds from a Plethora or Fulneſs of Blood, or from the Heat, Rareſcence, or Swelling of the Blood, but it is altogether improbable when it proceeds from a cold Cauſe, the Stagnation of the Serum of the Blood in or about the Brain. I anſwer,

That even the Super-abundance of Serum in the Lymphatick Veſſels proceeds originally from the Heat of the Blood.

The Caſe ſeems to be this, when the Blood by its Heat is too much rarified, the Circulation will be difficult, the capillary Arteries will be dried and ſhrivelled, Perſpiration will be ſtopped, thence it comes that the greater Quantity of Serum will be ſeparated into the Lymphaticks, as the Caſe is in ſome Fevers, in Colds which are at leaſt a Tendency to a Fever, in the Dropſy, which is always attended with a Fever, if it do not wholly proceed from it, in the Chincough in Children, and in pituitous Apoplexies. Then there will be a Plethora of Serum in the Lymphaticks, this will hinder its Circulation, the moſt watery Parts will evaporate, by its Stagnation or ſlow Circulation it will contract a Sharpneſs, or noxious Acidity.

cidity. This will endanger the breaking of the Lymphaticks, where the Plethora or Fulneſs, and the Stagnation is greateſt. And we find in Anatomical Diſſections of Apoplectick People, there are oftner found in and about the Brain Collections of extravaſated Water or Serum, than extravaſated Blood. And I am apt to think, tho' I am not ſure, that Ulcers in the Lungs oftner proceed from the breaking of the Lymphaticks, by the ſharp and corroding Serum, than from the Breaking of the Blood-Veſſels, their Coats being much finer and thinner than thoſe of the Blood-Veſſels. And the Salts of the Blood are purged and carried off not only by the Ureters, but by the Lymphaticks.

This ſeeming to me to be the Caſe, I muſt think, the Diſtinction of an hot and cold Cauſe of an Apoplexy is of no Uſe; and the Practice built upon it, of giving ſo many hot Things, in that, and many other Diſtempers that are ſuppoſed to come from a cold Cauſe, is of pernicious Conſequence. I think therefore,

1. That when there is too great an Abundance of Serum ſeparated into the Lymphaticks, there is every whit as much Need of Dilution, to thin and di-

lute the viſcid and ſharp Serum, as there is for the Blood in its moſt feveriſh and rarified State.

2. That the giving ſo many hot Things does not anſwer any (unleſs perhaps in the Primæ Viæ) true Intention. They cannot come at the Lymphaticks but by the Blood, that they heat and rarify, this leſſens Perſpiration, unleſs a Sweat follow, this ſtill increaſes the Separation of the Serum into the Lymphaticks. Or if any of the hot Particles get into the Lymphaticks, either they are drowned in the Serum, or if they have any Effect, it is only to make it more viſcid, and conſequently leſs fit for Motion.

Now as I have often ſaid, I muſt ſay, I think common Water is one of the beſt and ſafeſt Diluters in the World, and cold Water in moſt Caſes (tho' it may be not in all) much better than hot. And for procuring a Sweat, I know by long Experience, it will ſooner and better do it in a Fever than hot, becauſe it not only dilutes but cools the Blood, and by taking off its Rareſfence or Rarifaction, prepares it better for Sweating. Nor is there any Danger at all of its doing either the Blood or

Lympha

Lympha any Harm, unleſs it be taken when we are in a Sweat, or inclining to it. For it is ſufficiently warmed in the Stomach and Bowels before it enters the Blood, much more before it arrives at the Lymphatick Veſſels. And therefore it better anſwers the Intention of circulating the Lympha, than any Thing commonly known, and than any other Liquid. I am almoſt perſwaded by Dr. *Pitcairne*, and others, that there is not nor cannot be any Fermentation in any Part of the Body within the Compaſs of Circulation, whatever Dr. *Willis*, and almoſt all before, ſuppoſe or ſay to the contrary. For it is hard to think there can be any ſuch Thing in the Blood Veſſels, or the Lymphaticks, when the Blood and Humours are as long as Life laſts in continual Motion. Perhaps we may except the *Primæ Viæ*, the Stomach, and Bowels, where it is not impoſſible Alcalies and Acids may meet in ſuch Quantities as to beget a Fermentation. But ſuppoſe we one or the other, Water will never beget any ſuch Thing. It is one, and perhaps the beſt of thoſe Neutrals, that Sir *John Colebatch* ſpeaks of, that being neither Alcaly nor Acid, is the beſt Corrector and Abſorber of both Alcaline and acid Salts.

Cold Water therefore ſeems to me to be a moſt proper Remedy in any Caſe where there is a Super-abundance of Lympha in the Lymphatick Veſſels. I know it may ſeem at firſt View a Paradox to think of curing this watery Diſtemper by adding more Water, but if we conſider the probable Conſequences, perhaps it will not appear ſo abſurd. Therefore,

1. As I have ſaid before, the want of due and regular Perſpiration, is the moſt general and common Cauſe of theſe Lymphatick or ſerous Diſtempers. Now common Water, more than any thing, cools and dilutes the Blood, promotes due Circulation thro' the Capillary Arteries, opens the Glands of the Skin, and perhaps, if it give a kindly Sweat, evacuates the ſur-pluſage of Serum at once, at leaſt, it will leſſen the Secretion of the Serum into the Lymphaticks.

2. This, by paſſing into the Lymphaticks, will dilute the Serum it ſelf, make it leſs viſcid, and conſequently more apt for Circulation through the Lymphaticks. We may find, in a Morning, our Spittle, which is only Serum, mixt with Salts, is generally tough and clammy, and hard to ſpit out, but upon drink-

drinking a good diluting draught of any ſmall Liquor, but eſpecially Water, will alter in a few Minutes. Strong Liquors do not do this ſo well.

3. This will quite deſtroy the Acidity of the Lympha contracted by want of Circulation, or by Stagnation in the Lymphaticks, and will do this better than any Alcalies whatever; and, by conſequence, this will anſwer all the Intentions of Cure in this Diſtemper.

This likewiſe will open the Glands of the Mouth, the great Drain of this abounding Serum, both from the Head and other Parts of the Body. And, therefore, when a plentiful Salivation is by all allowed to be ſo neceſſary in the fluxed Small-Pox, or the diſtinct when they do not come kindly out, or do not riſe to a due height, there can be nothing better than plenty of cooling and diluting Liquors, and eſpecially Water, both to concoct the morbifick Matter, and prepare it to fill up the Puſtles, and if Nature want it to promote ſuch a Salivation, as will be ſome help in that Caſe.

To make this better underſtood, the Reader is to know, that ſome of our lateſt Phyſicians aſſert, that there is a

Circu-

Circulation of this Lympha in the Lymphatick Veſſels, that there are Arteries and Veins in the Lymphatick, as well as in the Blood Veſſels, and that the Lympha returns from the Lymphatick Arteries, by their correſponding Veins into the Blood-Veins, to cool and dilute the Blood before it enters into the Heart, and that thoſe that think ſo, make the vitiated Lympha the great cauſe of Fevers. Of this ſee Dr. *Helvetius*, a famous Phyſician in *France*, in his Treatiſe of the Small-Pox. And Dr. *Morgan* of Fevers, in his late Philoſophical Principles of Medicine. But when moſt Phyſicians have thought the riſe of Fevers to be in the Blood, when others, as Dr. *Chene*, think it to be in the Nerves, and when the two fore-mentioned place it in the Serum, in the Lymphaticks, I ought to to have no Opinion in the Matter, but to reflect how little we know of the true Cauſes of Things, and am more concerned to know, if I could, how and where the Fever will end, than how and where it began.

I will add no more on this Head, but only this, that the Coma, Carus, Lethargy being only Degrees of an Apoplexy, the Coma and Carus differing only in Degree, and the Lethargy from both, in that a Fever more commonly attends

tends it, I doubt not, if the Patient be not beyond the Poſſibility of being made to drink a Quantity of Water, it would be one of the beſt Things that can be done for them, for unleſs the cauſe that oppreſſes Nature can be removed, all the pulling, halling, and pricking ſuch People to awaken them ſignifies juſt nothing, but to diſturb them, and perhaps Nature too in its Struggle with the Diſtemper. That theſe Diſtempers come from Heat and Thickneſs of the Blood, or from a ſur-charge of the viſcid Serum heated at that Time, is plain, for as moſt Phyſicians look upon 'em as degrees of, and tending to an Apoplexy, and that a Lethargy is always attended with a Fever, and a Coma often comes upon a Fever. And they are ſo near ally'd, that ſome Phyſicians, as *Riverius* particularly treat of them all together, as he does in the ſame Chapter, ſo that if Water be good for a Fever, it cannot be bad for them, when they ſo often come with a Fever.

But it may be ſaid, *Febrifugum Magnum* recommends Water as giving a better Sleep than any Opiates, 7 Ed. *p.* 103. It does ſo, and with good reaſon as any one will find that will uſe it. But the Caſe is vaſtly different. A kindly Sleep is the greateſt Refreſhment to Nature.

Theſe,

Theſe, tho' called ſleepy Diſtempers, are the greateſt Oppreſſion of Nature. They are nearer Death than Sleep. They agree only in this, that during both, there is no actual Exerciſe of the Senſes, but differ extremely, in that common Sleep only ſuſpends the Exerciſe of the Senſes for a while, but recruits the Powers, and prepares Nature for the more quick and lively Exerciſe, the other put it under an Impoſſibility of exerciſing of 'em; and therefore *Bellini*, who treats of theſe Diſtempers diſtinctly, under each of 'em give this Caution, that we muſt not (whatever we call 'em) think 'em a Sleep.

Nay, a Lethargick Sleep is ſo like to that dozing dreaming Sleep that is given by Opium, that one Egg is not much more like another, than theſe two are to one another.

As I before recommended the drinking of Water to thoſe that have had one Fit of an Apoplexy, and eſcaped with Life, when by ſome Indiſpoſition they find they are apprehenſive that another Fit may be coming on, ſo I think there is not a better Preſervative againſt all theſe that are called ſleepy Diſtempers, than conſtantly to drink a Quantity of Water every Day; for it is eaſily obſerveable, they generally come upon thoſe that feed high,

high, eat much, and drink plentifully of hot and ſtrong Liquors, eſpecially when they grow fat with ſo doing, for ſuch a load of Fleſh will preſs upon and narrow the Veſſels, and eſpecially in the Head, where they are ſo infinitely ſmall, and cauſe 'em to be more eaſily obſtructed than in other People.

I would propoſe one Thing to the Phyſicians, and leave them to determine it; whether cold Water may not be a good Remedy for thoſe that have taken too much Opium, and are in danger of Sleeping their laſt? It is indeed obſerved by almoſt all Phyſicians, that cooling and moiſtening Things are the beſt to promote a kindly and natural Sleep (which is the Reaſon why Water is ſo good for this Intention) and I muſt ſay, I never yet ſaw Opium bring a natural Sleep, but on the contrary, it keeps ſome People from Sleeping.

Now if it ſhould prove true, that Water is good to take off thoſe that are called the ſleepy Diſtempers, and the Oppreſſion that Nature lies under in thoſe Diſtempers, and it be true that an exceſſive Quantity of Opium and other violent Narcoticks, bring the like Diſtempers, that which is good for one muſt be good for the other. Since I wrote this, I find that Dr. *Morgan* ſays,

that Water and Exercise are the best Things to take off Opium. It has a long Time been doubted, whether Opium be hot or cold, but now, as far as I can see, most Physicians think it to be hot, and reckon it among the powerful Diaphoreticks, and say, it raises, rarifies, swells, or fuses the Blood. And if it do so, it must be hot.

For my Part, I am of Opinion, that Opium works by stupifying the Solids as well as by raising and swelling the Fluids, and that is the Reason why it is so very good for allaying violent Pain, which may be done either by quieting the Humours that cause the Pain in any Part, or by stupifying the Nerves, and thereby taking away the Sense of it. And it seems clear to me, that if Opium rarify, raise, swell, and fuse the Blood, it cannot take away Pain that Way, but rather increase it, because that will make the Blood in the Arteries from the difficulty of Circulation swell and press more upon the Nerves, and consequently increase the Pain. We see this plainly in any painful Swelling in the Out-parts of the Body. Those Parts have a preter-natural Heat, which proceeds from the swelling of the Blood in the small Arteries, and its pressing upon the Nerves, and causing a difficulty of Circulation

culation in the Part affected, and ſo cauſes Pain, therefore Water is the very beſt Thing that can be drank when any ſuch Thing is under Cure, and much better than Small-Beer it ſelf, becauſe it cools and dilutes the Blood, and leſſens Heat and Fuſion. Whereas, even Small-Beer will often when the Body is indiſpoſed, cauſe Pain in the Bowels, and by its Windineſs muſt under any ſuch Indiſpoſition in ſome meaſure affect the Blood.

I am of Opinion likewiſe, that it is this Operation of Opium upon the Nerves, that is one cauſe why Opium is ſo good for the ſtopping of a Diarrhea or Looſeneſs, which I believe does not always proceed from the Abundance or Acrimony of the Humours, but in Part, from ſome Diſorder and Oppreſſion upon the Nerves, whereby they are put into a kind of gentle Convulſions, and the periſtaltick Motion of the Bowels is thereby increaſed beyond its natural degree, and is in Part at leaſt the cauſe of the Diarrhea; now this will be increaſed to an Habitude when the Looſeneſs continues long. If therefore Opium moderately ſtupifies the Nerves, and quiets their Contractions, it may be good for ſtopping the Looſeneſs.

Now as to giving ſo much Opium in Fevers, as is now commonly done, I am not afraid to declare, that I think it cannot be good, and that upon two Accounts.

1. As to the Fluids, the Blood, and other Humours, which by the Opinion and Confeſſion of our lateſt and beſt Phyſicians, it raiſes, *i. e.* heats, rarifies and ſwells, and this (unleſs it produce a Sweat) is plainly to increaſe the Fever, whereby it may likely do as much Hurt as the dozing, dreaming, unquiet Sleep it brings may do good. And as to its cauſing a Sweat, there is ſeldom any thing appears upon the giving of it. This therefore is plainly the Remains of the hot Regimen that Dr. *Sydenham* ſo much condemns. And tho' Dr. *Sydenham* preſcribed Paregoricks frequently, yet he ſeemed not ſo well to have conſidered the Effects as later Phyſicians have done, but knowing the Neceſſity of Sleep in Fevers, to refreſh Nature, and not knowing any Thing that would ſooner cauſe Sleep than Opium, he frequently gave it, eſpecially his own Laudanum.

I have often wondered, how it came ſo much in Faſhion in Fevers, for to the beſt of my Remembrance, about fifty Years ago we heard little of its ſo common Uſe, and I find by reading Phy-

ſicians

ſicians that wrote before that Time, eſpecially beyond Sea, there is not ſo frequent mention of preſcribing it.

But ſince I read Dr. *Sydenham*, I am ſatisfied it was he that brought in the ſo frequent Uſe of it in Fevers, and that it was his Reputation that eſtabliſhed it. And now it is become one of the four Cardinal Medicines, and we muſt ſcarcely take a Purge or Vomit without a Paregorick or a ſleeping Draught.

'Tis poſſible Dr. *Sydenham* might (as many others formerly did) think it a cooling Drug: But that it is hot is plain from what is ſaid in Commendation of it, that it preſently raiſes the Pulſe, which cooling Things in ſo ſmall a Quantity will not do; tho' that is no great Thing, for that may be done by any of the hot Alexipharmicks, eſpecially if they be Liquids.

2. As to the Solids, which ſome of our moſt modern Phyſicians from *Baglivi* make equally the Subject of moſt Diſeaſes with the Fluids. It is certain, they will be affected with the Heat and Dryneſs of the Blood, and other Fluids of the Body, and will grow too tenſe, and leſs yielding to the Fluids in their Motion. And the leſs they yield to the Fluids,

Fluids, with the leſs Elaſticity will they return, and compreſs the Fluids to forward their Circulation. But then if there ſhould be any Narcotick Quality in Opium, beſides that of its Heat, that does ſtupify the Solids, as probably there is, tho' we may not be able to give the Reaſon of it, this will certainly prejudice their Elaſticity, and oſcillatory Motion, and be of ill Conſequence to the Blood and Humours in their Circulation. This ſeems to be the Nature of all the Arteries, Veins, Nerves, and Fibres of the Body, that they may be either too lax with too much Moiſture, or too tenſe with too much Heat and Dryneſs. If they be too lax, they will indeed open for the Blood or any Liquids, but not return with any Force upon it. If they be too tenſe or ſtiff, they will not yield to the Humours, and conſequently have little Force for Want of a due Compaſs in their Oſcillation, both which will equally prejudice the Effect of their Elaſticity, which theſe Authors ſuppoſe is to ſqueeze and compreſs the Fluids, and forward their Circulation. I cannot think therefore, tho' the Practice is ſo common, that it can be good to give ſo much Opium in Fevers. And I am ſtill of Opinion, that if Plenty of innocent Liquids, and particularly good

common

common Water were given in Fevers, they would better promote a ſafe, quiet, and natural Sleep, than ſuch frequent Doſes of the uſual Opiates will do. And this I am well aſſured of, not only from the Reaſons I have before laid down, but from frequent Experience too.

But there is another Reaſon why I am againſt giving ſo much Opium in Fevers, and that is from the Nature of that Sleep that is forced by Opiates. As far as ever I could obſerve it is only a dozing, dreaming, unquiet Sleep, and as Phyſicians confeſs it hinders Sleep in ſome, ſo in thoſe it does cauſe to ſleep, it is ſuch a Sleep as it is much ado to determine whether it be Sleep or no, whether the Patient be awake or aſleep, or in a State between both, and perhaps as hard to determine, whether ſuch a Sleep refreſh Nature, or diſturb and oppreſs it. From this will follow theſe two ill Conſequences.

1. As to the Affairs of this World. If the Patient have neglected to make his Will, and ſettle his worldly Affairs, while he was in Health, he will not be very fit to do it now. I cannot think Perſons ſo thoroughly doſed with Opiates, as I have ſeen ſome in Fevers, much more fit to make or alter a Will

(as

(as ſometimes a ſick Perſon if ſenſible might deſire to do) than Lunaticks.

2. As to another World, ſuch Doſes of Opiates as are ſometimes given, I doubt, put the Patient into an utter Incapacity of doing any Thing by way of Preparation for that. I have been ſhockt ſometimes to find People in Fevers, as much awake as they could be after taking ſuch Doſes, and far from being delirious, and yet in ſuch a doſing Condition, that they were uncapable of receiving Advice, or joining in any Prayer that was made in their Preſence. And then they muſt be as incapable of thinking of their Eternal State, or doing any Thing by Way of Preparation for it. If ſome Phyſicians would think how many they have lock'd up in ſuch Darkneſs, *&c.*

I hope few of the Phyſicians are of that Gentleman's Mind, that being ſent for to a great Man, and his Patient happening to ſay ſomething that concerned Preparation for another World; ſaid, with ſome warmth, *My Lord, have you ſettled your Affairs for this World?* Every Body underſtood him. That Gentleman knows more by this Time, for

for he is ſince gone to make the grand Experiment.

I know ſome great Men tell us, in the Praiſe of Opium, what a placid and eaſy Condition it puts the Patient into, what fine Repreſentations, and beautiful Images it preſents to their Fancy and Imagination; in a Word, what pleaſing Dreams they have, and 'tis poſſible they may Dream of Heaven among other fine Things, tho' perhaps they have lived ſuch a Life as would make one think, they never ſo much as dreamed of it before.

In ſhort, if the Phyſician's Buſineſs were to give Opium to their Patients as Ladies do to their Lap-Dogs, to make 'em die eaſily, it is a ſure Way to do it. But to give ſuch Quantities of Opiates to procure ſuch a Sleep, as generally ſpeaking, is more like a Comatoſe or Lethargick than a true natural and ſound Sleep, ſuch a Sleep as no Body can be ſure whether it be good or bad for the Patient, whether it tend to relieve and refreſh Nature, or to oppreſs and diſturb it, to ſay no more I think cannot be reaſonable, eſpecially when if they would try it, they would find that Plenty of innocent Liquids, eſpecially Water, if they do not take off the Fever at once, they would at leaſt promote a more

eaſy and natural Sleep than the common Opiates.

To conclude, if Water be good for an Apoplexy, a Coma, Carus, and Lethargy, as ſeems to me probable, it may likewiſe be good to prevent the bad Effects of an over-doſe of Opium. I do not determine this Point, but leave it to the Phyſicians, if they pleaſe to think of it. However I am bold to recommend the drinking every Day ſome Quantity of Water, as a good Expedient to prevent thoſe that are called the ſleepy Diſtempers.

Of the PALSY.

THE Palſy is ſo near a-kin to the Apoplexy, that there will not need much to be ſaid of it.

The Head in this Diſtemper is either not at all, or very lightly affected. I have ſeen thoſe that have been Paralytick; Lame on one Side for twenty Years, and yet their Parts as quick as ever they were before. This ſeems a little ſtrange, but 'tis probable the Cauſe of the Diſeaſe is thrown from off the Brain

Brain and the Parts about it, upon the Spinal Marrow. Now when ſo great a Number of the Nerves of the Body take their riſe from that, it ſeems probable, that when the Head is free, and the Body, or any Part of it Paralytick, the Spinal Marrow is more or leſs affected.

If the whole Body below the Head become Paralytick, 'tis called a Paraplegia. This is a ſad Caſe when it happens, but very rare, and ſeldom fails to deliver the Patient from his miſerable Life by an Apoplexy.

If only one Side of the Spinal Marrow be affected with the Cauſe of the Diſeaſe, that Side of the Body grows Paralytick and is called an Hemiplegia. If ſome particular Part of the Body be Paralytick, it probably comes from ſome Indiſpoſition where the Original and Root of the Nerves that ſerve that Part are. Thus *Galen* being called to a Man that had a Palſy in ſome Part of his Hand, and Applications doing no good, upon Inquiry found he had lately, by a Fall, hurt a Place in the Spine of his Back, and applying ſome Things to that, he cured his Hand.

The internal Cauſes are much the ſame with thoſe of an Apoplexy, only weaker. But there are ſeveral external

Cauſes that may produce a Palſy that it may be would not produce an Apoplexy.

The common Methods of Cure (except thoſe Things that in an Apoplexy are applied immediately to the Head) are much the ſame in a Palſy (only ſomething more gentle, ſtrong Purges, Vomits, eſpecially Mineral) Glyſters internally, Frictions, Unctions, &c. externally. We may obſerve, that both externally and internally the ſtrongeſt and hotteſt Things are preſcribed, becauſe Phyſicians generally look upon thoſe Things the moſt attenuating and dicuſſing.

The laſt Things they generally preſcribe are Sudorificks (tho' I cannot tell, but perhaps they deſerve to be the firſt) and I cannot deny, but Vomits, Purges, Glyſters internally, and Frictions, Unctions externally, may be of uſe; yet I cannot but believe, that Sudorificks, if diſcreetly ordered, muſt be of the greateſt Advantage.

There is indeed a Queſtion among Writers about that, ſome are wholly againſt them, as (ſay they) carrying off the thinneſt Part of the Serum, and leaving the reſt more groſs, viſcid, and more ſtrongly impacted upon, and fixed in the paralytick Parts, and conſequently leſs apt to be moved, and carried off from the

Parts

Parts affected, and apt rather to increaſe than open the Obſtructions.

But then they ſhould conſider, that the ſame Objection lies againſt all their hot Medicines, that they are apt to heat, thicken, and dry the Blood, and make it more viſcid, that they make the Nerves too dry and tenſe, and tho' they are in ſome Meaſure taken inwardly, attenuating, and uſed outwardly, diſcuſſing, yet they evaporate the thinneſt Part of the Blood and Serum. Notwithſtanding this Objection, the beſt of former and later Phyſicians preſcribe them, *Sennertus*, *Riverius*, *Willis*, *Sylvius*, *Boerhaave*, *Pitcairne*, &c.

A Palſy ſometimes deprives the Parts only of their Motion, ſometimes only of Senſe, and ſometimes of both Senſe and Motion, and that certainly muſt be the worſt Sort.

Voluntary Motion is ſuppoſed by the lateſt Phyſicians to be by the Motion of the Liquidum Nervorum, from the Brain or ſpinal Marrow towards the Part to be moved, and Senſe by the undulating Motion of the amimal Spirits, from the ſenſible Parts towards the Brain. And they ſuppoſe that the Nerves and animal Spirits may be capable of either of theſe two Motions, when they are not of the other, and ſometimes be ſo obſtructed

ſtructed that they may be capable of neither. But this is to me a very diſſatisfactory and dark Account, tho' it be given by very great Men, and generally held by our late Writers. For 'tis plain to Experience, that the Acts of voluntary Motion in any Part of the Body may be done in a Moment, upon the Command of the Will, and there is no Time for the animal Spirits to move from the Brain to the Part to be moved. And Senſations are no leſs momentary, as ſuppoſe we touch any Thing with our Finger, we feel it in the very Moment we touch it, and there is no Time for any ſuch undulating ſlow Motion from the Part towards the Brain. And conſequently the Reaſon given for the Loſs of Senſe without that of Motion, and the Loſs of Motion without that of Senſe, are unſatisfactory, tho' we muſt allow the Fact from Obſervation. And we muſt either allow different Nerves for Senſe and Motion, or that Motion is made by one Part of the ſame Nerve, and Senſe by another. Or we muſt ſuppoſe that both voluntary Motion and Senſation, eſpecially that of Touching, depends upon ſomething, that from the Continuity of the Nerves, may affect a diſtant Place in a Moment, as when we pull a Cord

at

at one end, we move the other, or when thruſt a long Pole at one end, we move the other. But when Senſe and Motion are ſo often both together in the ſame Parts that depend upon the ſame Nerves, to ſuppoſe at the very ſame Time, and in the ſame Nerve, ſo quick a Motion of the Animal Spirits from the Brain to the Part, and a contrary undulating Motion towards the Brain is a little abſurd.

I ſhall not pretend to determine the true Mechaniſm of the Operations of the Nerves, or the Motions of the Animal Spirits. But I muſt ſay, the Account before given is to me at leaſt unſatisfactory, and that from plain Matter of Fact.

What is of more Concern to me to obſerve, is, that a Palſy, as all Phyſicians own, may come from too much Heat, or too much Moiſture, if the Blood be too hot, dry, and viſcid, the Nerves and Animal Spirits, whatever they be, will be affected by it, and the Nerves will be too dry, tenſe, and ſhriveled. And if it be too ſerous or too much Serum from any Cauſe be ſeparated into the Lymphatick Veſſels, the Nerves will be too moiſt and flabby, and either of theſe may produce a Palſy in the Parts they ſeize upon. Sometimes a Fe-

a Fever comes along with the Palſy, and then there is more Hope that the brisk and vivid Motion of the Blood may carry off the Palſy. Sometimes a Fever ends in a Palſy, and then the Palſey may ſometimes carry off a Fever that otherwiſe would end in Death. I have known Inſtances of this, particularly of a young Girl, that had a dangerous Fever, and it went off with a Palſy chiefly in her right Arm, which never grew much after, and tho' ſhe was as healthful as any other Woman, and never had another Fit, ſhe carried the Lameneſs with her to her Grave.

'Tis the Opinion of moſt Phyſicians, that the Palſy more frequently comes from too much Serum falling upon and ſtagnating in the Part affected, which makes the Parts looſe and flabby, and particularly the Nerves too moiſt and lax, and for want of a due Tenſity unfit to Contract themſelves for the Motion of the Parts. And this may ſometimes be the Caſe even when a Fever comes with the Palſy. Many good Phyſicians think, that often Fevers come from too much Serum ſeparated into the Lymphatick Arteries, which, for want of due Circulation, grows acid and viſcid, and not being duly returned by the Lymphatick-Veins into

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the Blood-Veins, to cool the Blood, both of 'em grow Hot and Feveriſh. And this is the more likely, becauſe Fevers ſo often proceed from the ſtopping of the Pores of the Skin, which keeps in the Serum, and Cauſes more of it to be ſeparated into the Lymphatick Arteries.

Now from whichſoever of theſe two Cauſes the Palſy may proceed, I am of Opinion, that the Uſe of Water, and eſpecially cold Water, both outwardly and inwardly is very good. To ſpeak firſt of the External Uſe of it.

'Tis plain, Sir *John Floyer* and Dr. *Baynard* give us ſeveral Inſtances of Apoplexies and Palſies that have been cured by cold Bathing, and the Uſe of Water, and as I remember, one of the Cure of a Paraplegia or Palſy of the whole Body below the Head with the Uſe of it.

If any ſhould think fit to uſe the cold Bath for any ſuch Intention, it would probably be the moſt effectual, if he went to Bed and Sweat after it.

If any be afraid of the Conſequence of this Method, I think, however, one may ſafely recommend waſhing the Part affected often with cold Water, taking Care to rub it well and dry after. *Hippocrates* ſays, Waſhing with

Water will Cure the Tetanus. *Vanderheydon* recommends Waſhing the Paralytick Member with Water, and Dr. *Pitcairne* approves of it. I ſuppoſe both of 'em from ſome good Experience. Its plain, a Palſy may ſometimes proceed from extream Cold, as being long in the very cold Air, handling Ice or Snow too long. The extream Cold, the handling the Ice or Snow brings a degree of a Palſy. Now the beſt Way to bring the Members to themſelves, is not to bring 'em ſuddenly to an hot Fire, nor perhaps to anoint 'em with hot Oils, nor to bathe 'em in hot Spirits, but to waſh and rub 'em well with cold Water, and to warm 'em by gentle degrees. In the Countries far North, thoſe that are forced to Travel long Journies in extream cold Weather, are ſometimes in danger of a Gangrene or Sphacelus in ſome of thoſe Members, that muſt more or leſs be expoſed to the Cold, particularly their Noſes; they do not anoint 'em with hot Oils, or waſh 'em with hot and ſpirituous Waters, but rub 'em often with Snow or Water. The Reaſon is plain, this keeps the Blood a-float, and preſerves the Circulation better than the hotteſt Things will do, and ſo prevents the Gangrene.

Now

Now in a Palſy there is always left ſome weak and imperfect Circulation in the Paralytick Members, elſe the Member would be mortified, and a Gangrene would follow. Now I think it highly probable, that waſhing the Paralytick Parts with cold Water, with moderate and frequent Friction, would better preſerve, promote, and increaſe the Circulation by moiſtening and preparing the impacted Humours to move and be carried off, and fitting the Parts for Nutrition, than the waſhing them with any hot Spirits, or with an Infuſion of hot Aromaticks, or anointing them with hot Ointments. 'Tis a great Queſtion whether theſe Things would be capable of diſcuſſing the Humours by the outward Application, or ſo far attenuating them as to fit them for Motion, but rather by their Heat evaporate the thinner and more ſerous Parts, and leave 'em more ſtrongly fixt and impacted in the Paralytick Members. I find it is the Opinion of ſome Phyſicians, that when Obſtructions are begot in the Hypochondria, or other Parts, there is a deal of the oily Parts of the Blood ſeparated with the Serum into the Lymphatick Arteries, which make it more apt to beget Obſtructions.

There is a Query that may be proper here, whether warm Water would not be better for this Intention. I am of Opinion not, from what we plainly find by the Operation of Water upon the Stomach, we find cold Water moderately conſtringes and braces the Fibres of the Stomach, whereas lukewarm Water relaxes them, and brings an Inclination to vomit, and ſo diſturbs the Stomach.

So far of the external Uſe of cold Water in the Palſy.

As to the internal Uſe of cold Water, I cannot but be of Opinion that it muſt be very good.

1. I have before obſerved, that among other Things, the beſt Phyſicians preſcribe Sudorificks, tho' they do not ſeem to rely ſo much upon them, as upon ſome other Methods.

2. It is highly probable that Sweating muſt be very good in Palſies, as well as it is in Fevers. They both proceed from the ſame Cauſes, the Heat and Dryneſs of the Blood, or too great Abundance of a viſcid Serum. And therefore we find that thoſe who live well (as we ſay) that feed high, drink much Wine, and uſe little Exerciſe, are moſt liable

liable to Apoplexies and Palſies, as well as to Fevers, and tho' laborious People, and thoſe that feed upon meaner Food, and drink ſmaller Liquors, may ſometimes be taken with them, yet it is more rare, and ſeems to be, becauſe they, thro' Careleſneſs, are more ſubject to Accidents that may ſometimes cauſe very violent Diſtempers.

3. I believe thouſands are by this Time ſatisfied that cold Water is the moſt innocent, and yet moſt powerful and effectual Sudorifick, and that it will give as plentiful a Sweat as any of the hot Sudorificks, with much leſs Diſturbance to the Blood, and Danger to the Body, and therefore muſt be the beſt Sudorifick in Palſies, as well as other Diſtempers.

4. That Water is the beſt Attenuater, and thins or attenuates the Blood and Humours, by diluting them, and mixing its fine Particles with them, and making them more fluid. The hot Attenuaters do it by cauſing a violent Motion in them, by fuſing them, as Liquors ſet over the Fire are attenuated when they are heated and boiled by the Fire. Now this cannot be done without great Violence offered to the Blood

Blood and Humours. And as boiling Liquors, tho' for the preſent they are attenuated, that is, their Parts are ſeparated, and their Bulk is ſwelled, and takes up more room, yet when the Violence of the Fire is taken off, they are more thick and viſcid, the more watery Particles being evaporated by the Heat of the Fire. So it is with the hot Sudorificks, if they be given in a ſmall Quantity, they only give a preſent Heat to the Blood, and puſh it forward for a while, but in the mean Time, they by that Heat evaporate its more ſerous Particles, and when that Heat is gone off, as it ſoon will, they leave the Blood more viſcid, and unfit for a regular Circulation.

That this is ſo, is plain from what happens to thoſe that (to cure that which is commonly called low Spiritedneſs) have uſed themſelves to drink Drams of Brandy, or other hot ſpirituous Liquors. Thoſe Liquors, as I ſaid, puſh the Blood, and quicken its Circulation for a while, but in a little Time, they are as low ſpirited as before, and want the ſame Remedy to give a Quickneſs to the Blood again, and ſo they come at laſt to ſuch an Habit and Cuſtom that they cannot be without them, where-

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by they quite ſpoil their Stomachs, burn, dry up, and ſhrivel the Primæ Viæ, and eſpecially the milky Veins, that carry the Chyle to the Body, and in ſome Time they muſt take their leave of their beloved Liquors and the World together. This low Spiritedneſs is nothing but a ſlow, heavy, and ſluggiſh Circulation of their Blood, attended uſually with ſome Difficulty of Breathing. And let any one obſerve, whether upon drinking a Quantity of any ſtrong Liquor, tho' he may for the preſent be more brisk and lively, he be not afterwards more dull, heavy, and low ſpirited, than he was before the drinking of them.

But then, if theſe hot Sudorificks be given in ſuch a Quantity, and under ſuch Regimen, that they reach to the Extremities of the Body, and force a violent Sweat, they may carry off indeed a Quantity of the morbid Serum, but they leave the Blood under a preter-natural, and I had almoſt ſaid, morbid Heat. And this is plain to the Experience of any one who will obſerve the Heat and Thirſt of a Perſon who has been ſweated by any of the very hot Sudorificks. But on the contrary, when a Sweat is given by cold Water, it not only as effectually and plenti-

fully

fully carries off the morbid Serum as any of the hot Sudorificks can do, but by ſupplying the Blood with a due quantity of freſh, healthful, and innocent Serum, leaves it in a cool Temper, and fit for an eaſy and regular Circulation. Now when in the Parts affected with a Palſy, the Circulation that remains muſt be ſlow and difficult, the Blood thus diluted muſt be more likely to creep into, and get through the ſtrait Paſſages of thoſe Parts, than that which is heated, rarified, and diſturbed by the hot Sudorificks, and conſequently if any Sudorificks be good in the Palſy, it muſt be the cool Sudorificks, among which Water is the very beſt.

And I will add one Thing now it comes into my Mind. The World has been for almoſt two thouſand Years fond of a certain Notion of Concoction of the Humours by Nature as neceſſary, before a Sweat be given in Fevers, from an Aphoriſm in *Hippocrates*, *Cocta non cruda ſunt Medicanda*, the Senſe of which is, that the Humours in Diſtempers, particularly Fevers, muſt be concocted before they be fit to be evacuated by Sweat. That is in ſhort, the Phyſician muſt ſtay before he give the Sudorifick, till he ſee whether Nature will kill the Diſeaſe, or the Diſeaſe kill Nature,

ture, and when the Diſeaſe has done its worſt, and Nature prevails, then he can eaſily knock it on the Head. The elder Sort of Phyſicians, eſpecially the *Galeniſts*, were mightily for the *Preparantia*, things that would prepare the Humours for Evacuation by proper Phyſick. I have wondered ſometimes, why we find ſo little in Authors of Things that promote this Concoction ſo neceſſary to prepare the Blood for Sweating. One would wonder, that in two thouſand Years, during which this Notion has prevailed, there ſhould not be found out ſome grand Concocter, but Nature alone muſt be left to do this neceſſary Work, before the Phyſician can do any thing to purpoſe by Sudorificks. Now I fancy I have by mere Chance hit upon this grand Concocter, that is, that ſimple Thing called Water. If I were to take a Vomit, I would a Day or two before take a Quantity of Water; and if that did not ſettle and clear the Stomach and make it eaſy, I would take the Vomit to perfect the Cure; and I am ſatisfied the Vomit would do as much good, and leſs hurt after the Water. If I were to take a Purge, I would in the like manner drink Water, and that would, I doubt not, ſo correct the Humours, and ſtrengthen the Bowels, that the Purge would work

more eaſily and with leſs griping, tho' there were no Correctors added to it, than it would otherwiſe. If I were to be Blooded, I ſhould think it good ſome time before, to drink two or three Glaſſes of Water to dilute and cool the Blood, and make it flow more eaſily and freely, whereas ſometimes it is ſo thick and viſcid, that it is hard to make it flow at all. But above all, if one be to take a Sweat, Water is not only the beſt Concocter of the Humours, and the beſt Preparer of the Blood for Evacuation by Sweating, but it ſelf the beſt and moſt innocent Sudorifick, and I am bold to ſay the Phyſician needs not ſtay waiting for the common Signs of Concoction, but may ſafely give it any time of the Fever, except the Patient be in a Sweat, or under a plain Inclination to it. And even then it may be given with a Toaſt in, and moderately warmed; or if the Patient be in any Fear of any Hurt by it, that may be certainly prevented by giving it in a ſmall Quantity at firſt, and then in a greater to the Quantity deſigned. I wonder any Man can be in a fright about the Danger of it, as ſome Phyſicians and Apothecaries would perſuade People to be, when almoſt one half of the World drinks little or nothing but Water, and are as healthy and ſtrong, and live as

long

long as we that drink ſtronger Liquors.

I boldly ſay, it is my Opinion, that it is the beſt of the *Preparantia*, for any of the fore-mentioned Evacuations, and it ſelf the beſt and moſt innocent Sudorifick and Diuretick. And I muſt look upon it as the grand Concocter of noxious Humours, and morbifick Matter in moſt Diſtempers, to prepare them for ſuch Kind of Evacuations as are moſt proper, or as Nature is moſt inclined to, under the preſent Diſtemper.

I have one Thing more to ſay upon this Head, and that is, that when any one has had a Fit of a Palſy, and therefore muſt be ever jealous of the Return of it, I cannot think there is a better Preſervative than to drink every Day ſome moderate Quantity of Water, and when he is under any Indiſpoſition that makes him apprehenſive of another Fit, to increaſe the Quantity of Water till the Indiſpoſition goes off.

I have by very credible Perſons been informed of a Man not very far from *London*, that had a Palſy in his Tongue, which took away his Speech, he took to drink ſome Water, and was ſenſibly better for it. How he went on, or what further Effect it had, I have had no

Opportunity to inquire. This was ſince *Febrifugum Magnum* came out.

Before I leave this Diſtemper, I might ſay ſomething of a lower Degree of a Palſy, a Stupor or Torpor, a Stiffneſs and Benummedneſs of ſome Member, that tho' it do not take away Senſe and Motion, yet affects one or both. This, if it continue, is looked upon, even by Phyſicians, as a Degree of the Palſy, and is ſometimes a Prelude to it, and Forerunner of it. And I doubt not to drink Water in Time, eſpecially in Bed, and to waſh the Part with Water, or bathe it in Water with Friction, would be a good Cure for it.

Sometimes this Torpor or Stupor, or Stiffneſs and Numbneſs is all over the Body, and may proceed either from lying and ſleeping in a moiſt Bed, or lying long upon the cold Ground, or riding long in extream cold Weather, (there are Stories of ſome in the very cold Countries that have been found on Horſeback frozen to Death) or ſome other like Ways. I have two very remarkable and well atteſted Stories ſince *Febrifugum Magnum* came out.

Two Lords with their Attendants were riding on Horſeback in the Country, deſigning that Night to reach a Place about

about fifteen Miles off, but Night came on. Being thus benighted, the Night very dark, and the Ways bad, they thought it better to take ſuch a Lodging as they could get, than go on. They came to an Houſe, and were content to take ſuch Beds as the Houſe afforded. One of the Lords happened to lye in a moiſt Bed, in Sheets not well dried or aired. He awaked in the Night, and found himſelf very ſtiff, but being weary, ſlept again. In the Morning he was ſo ſtiff that he could not poſſibly get on Horſeback, nor purſue his Journey. They ſent to borrow a Chariot of a neighbouring Gentleman, and ſo got to the Place they deſigned. The Lord went to Bed, and took a good Doſe of Water, he ſweat upon it, the next Morning the Sweat went off, he got up before Dinner-Time and was very well, eat his Dinner (as my Story ſays) as well as ever he did in his Life. I have this Account from a noble Lord that had it from his own Mouth.

The Conſequence of lying in a moiſt Bed is very dangerous, and yet People ſeldom take Care of themſelves till it be too late.

I myſelf have loſt one Son by it, and two others had like to have gone the ſame

ſame Way. One of 'em cured himſelf by drinking Water as the fore-mentioned Lord did.

Theſe are Accidents that happen often, and coſt many Lives, and therefore I ſolemnly recommend this Method, when People find themſelves out of Order by lying in moiſt Sheets, to go to Bed and drink Water to make 'em Sweat, and lie till the Sweat go off of it ſelf, which it will do when the Work is done. This Method, if taken ſpeedily, I believe, will never fail in that Caſe. If it be delayed long they may try it, but I dare not vouch for it.

Sometimes this univerſal Numbneſs or Stiffneſs of the Nerves and Muſcles of the Body may come from extreme Cold ſome other way. As for Inſtance, by lying long upon the cold Ground, eſpecially if we be hot.

There was in the Country a labouring Man, that having indiſcreetly lain long upon the Ground, became ſo benumbed in all the Parts of his Body, that he could hardly ſtir himſelf. A Gentleman from *London* being where the poor Man was, and having *Febrifugum Magnum* with him, adviſed him to go to Bed, and take a Quantity of Water; he did ſo, and by Sweating it took off his Stiffneſs, and he was well. I had

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this from one who was told it by the Gentleman himſelf.

Since Water is ſo certainly good for theſe leſſer degrees of, and Tendencies to a Palſy, it cannot but be good for a formed Palſy, tho' often neither that nor any thing elſe will cure it.

Of A CATARRHE.

I Need not give a Definition of a Catarrhe, no more than of a Cold, for it is no more than a laſting ſtubborn Cold that does not go off ſoon, eaſily, and well.

The old Phyſicians, even as far as *Riverius*, by what I have ſeen were of Opinion, that a Catarrhe proceeds only from the Head, that Vapours ariſing from the lower Parts to the Head, are there condenſed and turned to Water or Serum, and fall down again into ſeveral Parts of the Body. They explain their Opinion by pretty Similitudes. That of Vapours riſing from the Earth, and when they come to colder Regions being turned to Rain. The Vapours riſing in an Alembick, and being condenſed again. And ſome have compared the Stomach to a Boil-

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ling-pot, and the Head to the Cover, where the Vapours ariſing from the boiling Liquor will part of 'em be condenſed on the inſide of the Cover. Theſe Gentlemen put an hard Task upon the Brain, and no Wonder it is much out of Order if it muſt undergo the Labour of condenſing ſo many Vapours as will make up the ſuperfluous Serum in a Catarrhe, or a Rheumatick Conſtitution.

They have found indeed ſeveral Places whence theſe Vapours ariſe, but no Body has ever yet found how and which Way they can come at the Head. The Vapours that ariſe from the Earth, the Alembick, or the Pot, have a fair open Way to riſe, but we can find none for the Vapours from the Stomach, the Hypochondria, or the Womb, *&c.*

This Theory of the Vapours in Catarrhes, *&c.* is now almoſt out of Doors, and the later Phyſicians, ſuch as *Waldſchmidt*, *Doleus*, *Bellini*, *Pitcairne*, *Willis*, *Vanhelmont*, &c. either are ſilent concerning it, or openly diſcard it. Tho' 'tis Pity it ſhould be ſo, both upon the Account of the nice Gentlemen and Ladies, and the Phyſicians too. The one will have no handſome Excuſe for their low Spiritedneſs, they call Hypo and Vapours. And the Phyſician might make as much of

of a Fit of the Vapours as of two or three Fevers.

Nor are they better agreed how theſe condenſed Vapours fall upon ſome Parts of the Body, for Inſtance upon the Lungs. The general Opinion has been, that the Serum in Catarrhes falls directly from the Head upon the Lungs; now ſince Anatomy is ſo much improved, ſome are ſo bold as to ſay, that is impoſſible, and there is no direct Paſſage for 'em. And for the Argument taken from the Diſturbance given to the Head in Catarrhes, they ſay, that muſt needs be, becauſe there is a Circulation of the Serum in the Lymphaticks, as well as of the Blood in the Blood-Veſſels. And the Serum when it abounds in Quantity, or is vitiated in Quality, muſt diſturb the Head more than any other Part (unleſs we may except the Lungs) becauſe of the nice make of the Brain, its Tenderneſs, and the incredible Smallneſs of the Veſſels and Paſſages in and about it. The Opinion therefore of the lateſt Writers, is, that theſe Vapours (if there ever were any) were condenſed into Serum before they come at the Head, and that a Catarrhe generally comes from the ſudden ſtop of ſome of the neceſſary and natural conſtant Evacuations, particularly and moſt common-

ly that of Perſpiration from the whole Body, which does and muſt Cauſe a greater Quantity of Serum to be ſeparated into the Lymphatick Veſſels.

No Body will deny but a Catarrhe may ſometimes begin at the Head, when that is the Part firſt and moſt affected by the Cauſe of the Catarrhe, but then that is not by condenſing Vapours that riſe from the Body, but thoſe that are kept in the Head by the ſtopping its Pores.

Well, I think, I have ſpent but too much of my Time to little Purpoſe, I can eaſily leave the old and new Phyſicians to determine the Controverſy as they pleaſe, whether the Catarrhe hurts the Head by Vapours ariſing from the Body, and being condenſed in the Head, or by the Circulation of the Serum through the Head, as well as other Parts. That which I depend upon, is, that I am ſure the worſt Colds I have had, or have ſeen ſince I knew the Uſe of Water, have been cured or made ſafe and eaſy by the drinking of Water, and particularly in Bed, and therefore I think may be ſo. And till I can be convinced that there is any eſſential difference between a Catarrhe and a bad Cold, I muſt think that Water will cure a Catarrhe as it does a Cold.

Cold. There is but one Thing that can be ſuggeſted, that ſome may be by Conſtitution Rheumatick, or if I may ſay ſo, Catarrhous. That ſuppoſed, I ſay as I think, that Water is the beſt thing for it, that to drink Water ſometimes in ſome moderate Quantity, is the beſt Thing to cure it, or to prevent ill Conſequences by it. Old Men perhaps are moſt liable to this, and I am not afraid to declare my Opinion, that old Men may have more need of Water than young, and that a Man of fourſcore may as ſafely drink it as one of forty. I mean as I direct, ſome Quantity of it every Day, not to drink nothing but Water, which I never adviſed any old or young to do.

I am fully ſatisfied that Water taken in Bed, in a bad Catarrhe, will cauſe a Sweat, and that is the moſt effectual Way to cure the Catarrhe. The Phyſicians adviſe Sudorificks among other Things in this Diſtemper. Dr. *Pitcairne* adviſes indeed not to give them till after ſome other Evacuation, particularly Purging, for fear of a Fever. Indeed there is generally ſomething of a Fever comes with the Catarrhe, and in ſuch Sudorificks as he means, the hot ones, there may be ſome Danger of increaſing the Fever, if there be one, or

bringing a Fever when there was none before. But that cool ſudorifick Water will never either bring or increaſe a Fever, but take of the Fever, and in time the Catarrhe too.

With the Phyſicians, the *Univerſalia* in this, as in moſt other Diſtempers, are,

1. Purging with Hydragogues. I think as to what Influence they have, farther than upon the Bowels, all Purges are firſt Hydragogues.

2. If the Catarrhe be very bad, Vomiting.

3. Bliſtering behind the Head.

4. Blooding, tho' ſeldom, unleſs the Fever be violent.

Now I think Water alone, by its Diaphoretick and Diuretick Virtue will do the Buſineſs.

Water will anſwer all the Intentions of Cure.

1. It will dilute the Serum, which by too great a Plethora, and by a partial Stagnation, is grown viſcid, and unfit for Circulation. I think, viſcid and morbid

morbid Serum, when the Lymphatick Veſſels are too much ſtuffed with it, has as much need of Dilution to facilitate its Circulation, as the Blood has at any Time in its moſt feveriſh State.

2. It will take away the Acrimony of the Serum, and conſequently prevent the corroding and breaking of the tender Veſſels, and extravaſating of the Serum.

3. As a Sudorifick and Diuretick, it will carry off the ſuper-abounding Quantity of the Serum, and reduce Nature to its right Balance, and the Humours to their juſt Proportion.

It may be thought a ſtrange thing to cure a watery Diſtemper with Water, but if we conſider what has been ſaid, it may not be thought ſo abſurd.

I know it is common to give great Heaters and Dryers in Colds and Catarrhs, but to little Purpoſe, unleſs they give them in ſuch a Quantity as may do more Hurt than Good.

And I am afraid, Opiates, which are ſometimes given, may by their ſtupifying the Solids, rather hinder than help the Circulation. I might add, that in the ſeventh Edition of *Febrifugum*

gum Magnum, I have given an Inſtance that Water has cured the Chin-cough, and have made it, I think, probable, that Water may be one of the beſt Cures for that Diſtemper. And I am apt to think the Chin-cough in Children is much the ſame as a ſtubborn Catarrhe in Men, and includes all the worſt Sort of Catarrhs. The *Ferinus*, the fierce Catarrhe that by the Acrimony of the Serum corrodes and ulcerates the Lungs, and ſometimes brings a Conſumption. The ſuffocating Catarrhe, that is as dangerous in the Lungs as an Apoplexy is in the Head, and the Epidemical, of which Dr. *Willis* gives a famous Inſtance, in his Book of Fevers, *cap.* 17, and is a Sort of lighter and milder Plague. All which I believe Water will cure, or prevent their ill Conſequences. The Ferinus, the fierce Catarrhe by ſweetning the Serum and abſorbing its Acids. The ſuffocating Catarrhe, by promoting and preſerving a due Circulation of the Blood thro' the Lungs, and the Epidemicus, or malignant Catarrhe, as well as, I think, it will cure other Plagues. And the Chin-cough in Children, and the Catarrhe in Men, agree in this, that they moſtly either come from or come with a ſlow, lurking, continual Fever. Now

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it is plain, in the Chin-cough, when it is bad, and lasts long, Children sometimes grow consumptive, sometimes are suffocated, and the Distemper is always infectious, and often Epidemical, and I do not see, but what will cure that may cure a Catarrhe. I think therefore there is not a better Cure for the most stubborn Catarrhe, whether constitutional, or accidental, than to drink much Water, and to drink it in Bed, and try to sweat with it, always with this Caution, that you let the Sweat have its Course, till it go off of it self; for in this Case of Sweating with Water there is little Danger of over-doing it, or weakening the Patient by too much Sweating. For the Sweat, as far as I could ever yet observe, when the Work is done will go off of it self.

Of the Palpitation *of the* Heart.

THE Palpitation of the Heart, is such a violent Motion of the Heart as disturbs the constant, regular, and even Systole and Diastole thereof, or the regular Dilatation or Opening, and the Contraction or closing of it.

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Some call it only a violent Concuſſion, but moſt think it to be properly a Convulſion in the Heart.

Now as Convulſions are properly violent Motions in the Nerves of any Part, irregular Contractions and Dilatations, or rather ſtretching of the Nerves, 'tis eaſy to conceive, being they obſerve no certain Rule, nor as to their Motions can be brought under any Obſervation, they muſt needs alter and diſturb the regular Contraction and Dilatation of the Heart. And being theſe Convulſions proceed from ſome violent Cauſe, they will make the Contraction of the Heart in its Syſtole, ſometimes ſtronger, and ſometimes weaker, and its Dilatation, ſometimes more full, ſometimes leſs full, than regularly they ought to be, to promote the regular and eaſy Circulation of the Blood. From thence will proceed a great Difference in the Pulſe. Sometimes it will be more quick, and ſometimes more ſlow, ſometimes more high and ſtrong, ſometimes more low, with frequent Alterations and Intermiſſions. But generally too high and ſtrong, as appears by its violent Beating againſt the Breaſt, which may any time be ſeen and felt, and ſometimes (as Phyſicians tell us) be heard too. Nay, ſometimes the Heart beats with ſuch Violence as

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to break ſome of the Ribs, or to diſlocate and alter the Situation of ſome Parts of the Breaſt. This one would ſcarce believe, were it not poſitively aſſerted by ſome great Men that pretend to have Experience of it.

The conſequence of theſe Convulſions will be, that the Heart muſt contract it ſelf more or leſs, ſooner or later than it ought (and ſo of the Dilatation) and this will produce little Stagnations of the Blood in the Veſſels that convey it to the Heart, and in the Veſſels that carry it from the Heart, and in the Heart it ſelf, which will mightily diſturb the Circulation, and endanger a Syncope or a total Stagnation, *i. e.* Death it ſelf; and if that be true that ſome ſeem to believe, may ſometimes be the Caſe, that the Cauſe affects only one Ventricle, the Caſe then will not be leſs, but perhaps rather more dangerous.

Phyſicians diſtinguiſh the Palpitation of the Heart into Idiopathick, when the Heart it ſelf is immediately and firſt affected, and Sympathick, when the Cauſe of the Palpitation lies firſt in ſome other Part, but this in this Diſtemper being ſo hard to diſtinguiſh is not of much uſe.

They likewiſe diſtinguiſh in their Proceſſes the hot and cold Cauſes, but this

ſignifies not much, for I fancy the cold Cauſes turn hot before they come much to affect the Heart.

The things they generally uſe both inwardly and outwardly, are either the higheſt Cordials, or at leaſt the more cool and moderate ones. I do not find that any one pretends to any Specifick in this Diſtemper, farther than thoſe Things that have been thought above all other to ſtrengthen and corroberate the Heart, ſo that if it ſhould prove that cooling and opening Things ſhould be better for this Diſtemper, they muſt have been hitherto a little out of the Way.

Foreſtus de cordis affectibus, lib. 17. ob. 1. tells a Story, which, if true, is enough to ſhame all the laborious Compoſitions of the hot Aromaticks, Herbs, Flowers, Roots, Amber, Coral, Sanders, *&c.* That a young Gentleman was ſtabbed under the left Shoulder through into his Breaſt; he fell into a Fever, with ſuch a Palpitation as he had never ſeen in his Life, ſo violent that the beating of the Heart might be heard into the next room. He being ſent for, Blooded him in the left Arm, got ſome green Baum and Borrage, pounded them, and laid them a while upon a clean Tile heated in the Fire (I ſuppoſe ſuch as A-

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pothecaries uſe) ſprinkled them with Roſe-Water and a little Vinegar, laid 'em to the Heart, the Palpitation to the Admiration of all ceaſed immediately, as if it had been done by a Charm or Miracle. He ſays, he learnt this of his Maſter in *Italy*. Every Body knows theſe are cooling, or not heating Things, far from the violent Heat of thoſe Aromaticks, Herbs, and other Things that make up the moſt pompous Compoſitions for this Diſtemper. And indeed I obſerve of *Regius* in his Caſe of the Palpitation, that he preſcribes only cooling and mild Things in his Method for the cure of it.

So that I cannot ſee, but to give mild and moderately cooling Things, muſt be, generally ſpeaking, the beſt Method of curing this Diſtemper.

I ſhall therefore here without obſerving any nice Method, mention thoſe Things that are aſſigned as the Cauſes of this Diſtemper, and ſhew that the drinking of common good Water may be likely to remove all or moſt of 'em.

We are told by ſome, that the Palpitation of the Heart is a convulſive Motion from a bilious or ſharp Matter in the Pericardium or Membrane that encompaſſes the Heart.

In general, it is my Opinion, that Water is a very good Correcter of the Bile in any Part of the Body, whether in the Stomach, the Bowels, or the Hypochondria, and I know that Water is good for Hypochondriacal Diſtempers, to cool and make more fluid the Blood and Humours, and to open thoſe Obſtructions that are apt to grow from the Heat, Dryneſs, and Viſcidity of the Blood and Serum, or other Humours, that move too ſlowly in thoſe infinitely complicated Veſſels, that are in the Spleen, Liver, Sweetbread, &c. I know by long Experience, that Water alone will cure the Jaundice, if taken in due Time, and a good Quantity, eſpecially with Exerciſe, as walking or riding after it. And I believe, that taken the ſame Way with Exerciſe, and continued for as long Time every Morning as a Courſe of Steel is taken, it is a good Remedy for the Scurvy and Hypochondriack Melancholy (if there be any ſuch Diſtemper) and perhaps as good as Steel it ſelf.

The Deſign of that Collection of Water between the Pericardium and the Heart, is probably gueſſed by Phyſicians, to be to keep the Heart moiſt, that it may not grow too dry and unpliable to its neceſſary Motion. And as I will

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not deny but there may be too great a Collection of it, or with too much Bile, ſo, I think, it is poſſible there may be too little, and then ſuch a diluting Thing as Water may be proper to increaſe it, when by the Heat of the Heart it may be too much evaporated.

They tell us, that 'tis the conſtant Motion of the Animal Spirits to the Heart, and their diſtilling upon it, that cauſes the conſtant regular Syſtole and Diaſtole of the Heart, and that in the Palpitation they are in too violent a Motion, and that Hurry of the Spirits cauſes the Palpitation. I confeſs, I have no clear Notion how a few Drops of ſuch a Liquid as I believe the animal Spirits are, can move ſo great a Muſcle as that of the Heart, or what becomes of them when they have moved it, for I never yet read of any Circulation of the Liquidum Nervorum, or whence it can be ſupplied with ſuch a Quantity of theſe Animal Spirits as there muſt be, tho' but a Drop or two were afforded to the Heart at every Contraction, when the Pulſe beats above ſix thouſand times every Hour, and there are as many Contractions.

One might therefore query, whether the Heart have not in it ſelf, under the great

great Mover of the Univerſe, an innate Principle of Motion, ſuppoſing always a due Diſpoſition of the Organs, as muſt be ſuppoſed to all other Motions. I find ſome bold Phyſicians begin to deny there are any animal Spirits, and others laugh at the great and ſtupendous Things that have been, and ſtill are attributed to them, by out greateſt Philoſophers and Phyſicians, and the ſad Work they make in the Bodies of Men when they are a little out of Humour. They that will read Dr. *Chene* of the Gout, and Dr. *Morgan* in his late Book of the Philoſophical Principles of Medicine, may ſee what I ſay is true.

I find the laſt Dr. I mentioned is come to aſſert an intrinſick innate Principle of Motion in the Muſcles, upon the Command of the Will. I cannot blame him, for there are to me inſuperable Difficulties in all the Accounts I have yet ſeen of voluntary muſcular Motion, and I would query whether there be not as many and as great as to the Motion of the Heart by the continual Diſtillation of the animal Spirits.

But to leave this to the Philoſophers. I do not believe that the Animal Spirits are ſuch fiery and furious Things as ſome very great Phyſicians make them, that when they are angry they muſt

muſt make the Heart to tremble, I am apt to think they are nearer Water than Fire, or if not, Water is good to quench Fire, and may be good to quiet the Heart under its Palpitations.

Of the Galeniſts, ſome attribute this Palpitation to too dry and hot a Diſpoſition of the Heart: Water is good to cool it. Some to groſs Humours from the Hypochondria, if ſo, Water is good to dilute them, and fit them to go off. Others to a Polypus, or ſome Matter in the Heart, Water is good to waſh them away, and much better in my Opinion than your volatile Salts, which are likelier to harden and fix than to diſſolve them.

No doubt Polypus's are nothing but Concretions of the groſſer Parts of the Blood intangled in its fibrous Parts, ſtopping in the Heart. Any Body may judge whether Water or Spirits be likelier to diſſolve them. *Aegineta* thinks they proceed from too much Blood. In that Caſe, tho' I am not againſt Blooding, if there be no Counter-indication, yet I am ſatisfied Water alone without Blooding will anſwer the Intention, for that which is ſometimes imputed to the Quantity, may proceed only from the violent Motion, Ebullition, Effervescence, or Swelling of the Blood,

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and that Water will cure without Blooding in this as well as I am ſure it will in Fevers. *Fernelius* attributes this Diſtemper to aduſt Choler, or heated Bile. And I am very well perſuaded nothing will correct Bile or Choler better than Water.

Paracelſus compares this Palpitation to an Earthquake, as that is cauſed by expanded Vapours within the Earth, ſo is this in the Heart. The Alluſion is ingenious, but not much to the Purpoſe. However, as the Earthquake is ſometimes taken away by ſome vaſt Eruption of Waters, ſo *&c.*

Willis, *Sylvius*, and moſt others, think this Palpitation is a Convulſion of the Heart, and think the difficult Circulation of the Blood through the Heart, by ſome Concretions in the Heart, or in the Lungs, is the Cauſe of it. Now I have ſaid before, that I think to drink Water plentifully is the likelieſt Way to diſſolve thoſe Concretions, and by diluting the Blood to promote its Circulation.

Some ſuppoſe there is a kind of Poiſonous in the Blood, that ſometimes cauſes this Diſtemper; I know nothing of that, but I think that it may be made probable, that Water will cure ſeveral Sorts of Poiſons.

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Sometimes there appears plenty of red Gravel in the Water in this Diſtemper, and then Diureticks muſt be good, and there is hardly any better, at leaſt that will do ſo much good and ſo little hurt as Water.

Many Phyſicians (eſpecially thoſe that think this Diſtemper Convulſive) commend Anteplepticks, Things good for the Falling Sickneſs. I believe to drink Water is good for that. *Vid. Feb. Mag. P. ult.*

When the Palpitation is by Conſent with the Spleen, the Hypochondria or the Womb they commend Steel. I believe in thoſe Diſtempers that will bear Exerciſe, Water taken every Day with Exerciſe after it would do as well, but here I dare not recommend it becauſe the Palpitation ſometimes comes from violent Exerciſe.

Where this Palpitation comes from Worms, take away the Worms, and you take away that. I believe the Worms would never have come if the Perſon had uſed himſelf to drink Water ſometimes, whether they will go away with that alone I cannot tell. We plainly ſee Worms are ſometimes drowned upon the Ground with a great deal of Rain, Why not in the Belly?

There are ſeveral other Cauſes of this Palpitation, ſome that cannot be avoided, ſuch as ſome Indiſpoſitions of the Solids in and about the Heart, and ſome that may be avoided, as violent Exerciſe of the Body, violent Paſſions of the Mind, but theſe I need not mention.

Waldſchmidt commends the plentiful drinking of green Tea in this Diſtemper, and tells us that it will not bear ſtrong Purges, and I fancy Tea of Borrage, Bugloſs, Baum, Leaves of Clove-Gilly-Flowers dried, and ſome ſuch cooling Cordials drank plentifully would be very good in this Caſe.

Of Convulsions, *or the* Epilepsy, *or* Falling-Sickness.

A Convulſion properly ſpeaking, is when the Nerves, Muſcles, Tendons of any Part are ſo Contracted that the Part is deprived of its natural Motion, and is not under the Command of the Will.

A convulſive Motion is when the Member is moved ſeveral ways, ſometimes

times with Intermiſſions, but ſtill not under the Command of the Will to increaſe or ſtop ſuch convulſive Motions.

Examples of the firſt are the Tetanus, when the whole Body is ſo convulſed that it grows ſtiff and immoveable. The *Emproſthotanus*, when the Nerves and Muſcles of the fore Part of the Head and Body are ſo fixed by Contraction, that the Head and Body are bowed forward, and the *Opiſtthotonus*, when the Nerves, Muſcles, and Tendons of the Head and Body are ſo fixed by Contraction, that the Head and Body are bowed backward. There are other Examples of theſe Convulſions, ſuch as the Spaſmus Cynicus, the Riſus Sardonius, and ſome others, that it is no Matter for naming.

'Tis plain, I think the Cramp is to be referred to the firſt Sort of Convulſions, (notwithſtanding ſome are of another Opinion) and is nothing but a violent and for ſome Time a fixed Contraction of the Nerves, Muſcles, and Tendons of the Thigh, the Ham, and Calf of the Leg, which (tho' it generally goes off in a little Time) if it continue, may be cured moſtly with only Rubbing or Friction with the Hand, but ſooner if it be waſhed and rubbed well with

warm or cold Water, without any of thoſe very hot Oils, that are commonly preſcribed in that Caſe.

That I may ſay it once for all, 'Tis with me a Rule, that in all Caſes that I can at preſent think of, wherever Waſhing or Bathing the Body is good for any Diſtemper, there drinking Water at the ſame or other times is good too. Particularly in this Caſe of the Cramp, I knew a Gentlewoman that was hardly perſwaded to drink ſome Water every Day, to keep her Stomach in order; ſhe uſed to be much troubled with the Cramp, but after ſhe took to drink ſome Water every Day, never (that I could find) complained of it.

Hippocrates ſays, that Waſhing with Water will cure the Tetanus, (and conſequently the other fore-mentioned Convulſions) and I doubt not, if that be true, the drinking of Water will ſpeed the Cure, and from the ſame Reaſon it muſt be good in ſuch Contractions of any particular Part, as make the Member unfit for its natural Uſe, and put it from under the Command of the Will.

It is to be noted, that tho' there is a manifeſt Difference between theſe two Sorts of Convulſions, thoſe that are more properly called Convulſions, that make

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the Parts convulſed ſtiff and rigid, and are only the Tenſion of the Nerves, Muſcles, and Membranes one Way, and thoſe that are more properly called convulſive Motions, where the Nerves are moved alternately ſeveral Ways, yet both theſe are commonly called Convulſions, and that even in Phyſick-Writers themſelves.

Now of theſe ſecond Sort of Convulſions, or convulſive Motions, ſome affect the whole Body, and others particularly affect ſome one or other Part of the Body.

For Inſtance, the Hiccup, the Palpitation of the Heart, Convulſive Cholicks, Hypochondriack Convulſions, Hyſterick Convulſions, beſides thoſe that commonly attend other Diſtempers, particularly in the Beginning and End of bad and malignant Fevers, the Cholera Morbus, Dyſſenteries, *&c.* but above all the Epilepſy or Falling-Sickneſs, which is the greateſt Inſtance of thoſe convulſive Motions, and perhaps the moſt difficult to be cured of any of them.

As to the Hiccup, which is only a convulſive Motion of the Nerves of the upper Orifice of the Stomach, or the Midriff, or both together, and may proceed, as other Convulſions do, from too much

much Fulneſs, as after a full Meal, or too much Emptineſs, but generally comes from Heat and Dryneſs, by eating high-ſeaſoned Meat, *&c.* or drinking too much ſtrong Wine, or taking too much Tobacco. Be the Caſe as it will, I know a good Glaſs of Water will take it off in a Minute.

As to the Palpitation of the Heart, I have before made it, I think, probable, that drinking much Water may be a proper Cure for that Diſtemper.

I might here add (which I forgot then) the Experience of Dr. *Short*, who has lately writ a Book of Water. He tells us, that he himſelf had that Diſtemper for eleven Months together, and could not be cured by any Means till he drank Water.

As to the Nervous Cholick, I know cold Water taken with Exerciſe after it, or in Bed, is one of the beſt Remedies for all Cholicks whatever, and I much queſtion, whether all Cholicks are not more or leſs Nervous. To be ſure, whatever the Cauſe be, it is the Irritation of the Nerves, their too violent Tenſion and Contraction, that cauſes the Pain. I know one that laughed at Water, and the Book about it, as much as other People, but being often ſubject to the Cholick, happened to try it,

it, and found the Effect of it, and now he uſes nothing elſe, and it never fails to take off the Fit, in Bed ſometimes by Sweating, and ſometimes without it.

As to Hypochondriack Convulſions, it is to be obſerved that theſe never happen but when the Obſtructions in thoſe Parts are very great. Now I have aſſerted before, and, I think, made it probable, in my Diſcourſe of Melancholy, that Water, either taken in Bed, or with Exerciſe, Walking or Riding after it, is a very good Cure for thoſe Obſtructions, either in Melancholy, the Jaundice, or Scurvy, and conſequently will either prevent or cure ſuch Convulſions.

As to Hyſterick Convulſions, or Fits of the Mother, which ſometimes produce very violent and dreadful Effects in the whole Body, at leaſt for ſome Time; tho' moſt of the antient Phyſicians, even from *Galen* down to theſe later Times, imputed them to certain Fumes or Vapours riſing from the Womb, and affecting the Hypochondria, the Lungs, and the Head; the later, and commonly now eſteemed better Phyſicians, ſuch as *Willis*, *Bellini*, *Boerhaave*, *Pitcairne*, *&c.* look upon them to be true and proper convulſive Motions,

ons, that by the Continuity of the Nervous Syſtem, produce thoſe dreadful Effects, in the Head and other Parts of the Body. And tho' I have no Experience in this Caſe, yet I almoſt as much believe, the good Effect that Water would have, either to prevent or cure this difficult and dreadful Diſtemper, as if I had Experience of it. Upon this Occaſion I will be bold to ſay, that there is not one of thoſe Diſtempers (except the Plague) that I recommended Water for in my *Febrifugum Magnum*, but I have occaſionally met with Inſtances, and in ſome, a great many of Water being uſed with Succeſs in thoſe Caſes. And I cannot but believe, if thoſe that are inclined to theſe Hyſterick Convulſions, would, when they are apprehenſive of ſuch a Fit coming on, drink a good Quantity of Water, it would either prevent the Fit, or make it more gentle. And this they might ſafely do, tho' they have not been uſed to drink Water, by drinking but a little at firſt, and going on by Degrees, to a greater Quantity, as they find the Water to agree with them or not.

The Cholera Morbus, where it goes to Extremity, often ends in violent and mortal Convulſions. Now Water is good to prevent that Extremity, as I hinted

hinted in my *Febrifugum Magnum*, and within a Fortnight after that Book came out, received a well atteſted Account of a Perſon that had ſome Years before been cured by a learned Phyſician, when all other Means failed, only by preſcribing a few ſmall Glaſſes of Water.

Vomiting is certainly from a convulſive Motion in the Stomach, and there is nothing better (as I have often found by Experience) to ſtop it than cold Water.

I believe the Reaſon why Water is ſo good (as it certainly is) to ſtop a Diarrhea or Looſeneſs, is not only from its abſorbing Acids, and taking off the Acrimony of the Humours (which I think it will do better than any Alcalies whatever) or from its diſpelling Wind, or any flatulent Humours, but from its laying as an Anodyne the convulſive Motions of the Bowels, which ariſe either from purging Phyſick, or from a Flux of ſharp Humours from the Blood, and which always more or leſs irritate the Bowels in Diarrhea's.

I think we cannot ſuppoſe, that a little Rhubarb, or a ſmall Doſe of Scammony, or two or three Grains of Elaterium, ſhould in ſo little time as we ſee is done, diſſolve all the Feces of the Bowels, and

prepare them for Evacuation, this is done by their Irritation of the Bowels to theſe Contractions, or convulſive Motions, and conſequently the laying of theſe is neceſſary, when the natural or medicinal Diarrhea is immoderate and hurtful.

This I fancy Water will do, as effectually and with leſs Danger, than thoſe Aſtringents that are commonly uſed, which generally conſiſt either of ſtrong Acids, or high Aromaticks, which one would think ſhould rather irritate than quiet the Motions of the Bowels, as we ſee by Experience they do thoſe of the Stomach.

It is common for malignant Fevers, Small-Pox, and Meaſles to begin with Convulſions, *i. e.* convulſive Motions: Now I have obſerved, that the giving of Water in the beginning of theſe Diſtempers much ſooner allays or takes off the Violence of theſe Convulſions and other violent Symptoms, than they uſually abate or go off of themſelves, and conſequently Water muſt be good for theſe convulſive Motions.

Convulſive Motions in the end of bad Fevers are looked upon by all Phyſicians as a Symptom of approaching Death; now I have known theſe Convulſions (even in that Extremity, and when the Caſe was hopeleſs, and the Phyſician had given

given up his Patient, and durſt preſcribe nothing further) I ſay I have known them taken off in a little time by giving Water. I have given a well-atteſted Inſtance of it in my *Febrifugum Magnum*, in the laſt Page of the 7th Edition, which is ſtill a further Proof that Water muſt be good for theſe Convulſions, or convulſive Motions.

There are ſometimes in bad Fevers very violent Symptoms, and always in the cold Fit, Tremblings, Shiverings, and ſomething of a Rigor or Stiffneſs, and a very troubleſome Chilneſs more or leſs happen. Now theſe cold Fits are nothing but a leſſer Degree of convulſive Motions proceeding from Obſtructions and Irritations in the capillary Arteries, and the giving of Water promoting a free Circulation, and reaching ſooner to the capillary Arteries than moſt of thoſe hot Sudorificks that are ſometimes given in that Caſe can do, (becauſe of the ſmall Quantity in which they muſt be given for fear of Inconvenience) I ſay, Water takes off the cold Fit ſooner than either, it would go off of it ſelf, or by any hot Sudorifick.

The Caſe of the Bark is quite of another Nature, there being no Evacuation at leaſt ordinarily upon it, it muſt cure either as a Stiptick, by ſtopping the

morbifick Matter that it cannot break out into a Fit, or as an Alcali abſorbing the Acids in the Stomach, Bowels, and Blood. That it is a great Stiptick all now agree, and therefore it is frequently given in Hemoptoes or Spitting of Blood. And Dr. *Morgan*, a late Writer, thinks it is one of the moſt noble Alcalies, that it abſorbs the morbifick Matter in Agues, and ſo cures them. Which laſt ſeems to me the more likely, becauſe I am well informed by a Gentleman that has tried, and known it tried very often, that a Drachme of Powder of Crabs Eyes (Crabs Claws) with half the Quantity of white Sugar-candy finely powdered, and taken an Hour before the Fit in ſo much of any innocent Liquid as will get it eaſily down, will in ſome time cure any Ague. I remember that the learned Dr. *Harris* obſerves ſomewhere, that the reaſon why ſuch innocent alcalious Powders do ſo little good in Fevers, and other Diſtempers, where they are proper, is, becauſe they are underdoſed, and the Phyſicians do not give enough of them. The fore-mentioned Medicine may ſafely be taken without any nice Regimen, becauſe no Evacuation follows upon it.

Having thus ſaid ſomething of Convulſions ſtrictly ſo called, that fix the Parts,

Parts, and make them uncapable of their natural Motions, and of convulſive Motions (which are likewiſe very commonly called by Writers Convulſions) I now come to the greateſt Inſtance, and perhaps hardeſt to be cured of all theſe ſorts of convulſive Motions, and that is the Epilepſy or Falling-Sickneſs.

I ſhall not attempt to make a juſt Diſcourſe of the Epilepſy, but only make ſome ſhort Obſervations on ſome Things I find in Authors, ſuch as may ſuit with my Deſign, without obſerving any Method.

Writers are not well agreed about the primary Subject of theſe convulſive Motions in the Epilepſy. Moſt of the old Phyſicians think the Brain to be the primary Subject, and *Sylvius* agrees with them, that the *Cerebrum Cerebellum* and Spinal Marrow are ſo; but this cannot be ſo, for if ſuch convulſive Motions, as are obſerved in the Epilepſy, were in the Brain, or ſpinal Marrow, they would deſtroy the very Conſtitution of them, and take away all Senſe and Motion. 'Tis plain therefore, that in moſt Epilepſies, the Brain is but ſecondarily affected, tho' ſometimes the Loſs of Senſe follows. But to be ſhort, others aſſign the Muſcles, others the Nerves, others (as *Willis)* the

the animal Spirits, ſome few the Tendons, but moſt think all theſe together, in the muſcular and fibrous Fleſh. By all which it appears, how much the beſt Philoſophers and Phyſicians are in the dark in the Cauſe and Cure of theſe and other Diſtempers, and how vainly we talk of Specificks, in the Epilepſy (as in many other Diſtempers) when the Cauſes of the ſame Diſtemper are often ſo various and hard to be known and diſtinguiſhed. And I believe I ſhall be able to give as good Reaſons why Water ſhould be a Specifick, as any one can do, why any of thoſe that are counted Specificks ſhould be ſo, whether found in the animal, vegetable, or mineral Kingdom. Tho' I ſhall never deny, doubt of, or diſpute againſt any of them, when confirmed by ſufficient Experience.

I cannot deny but the Brain may affect the Nerves by Degrees, by communicating a vitiated *Liquidum*, or animal Spirits, and may be an antecedent and remote Cauſe of Convulſions, in one Part or other, but Convulſions can never begin in the Brain without the Deſtruction of it.

Several of the beſt Phyſicians agree, that thoſe Irritations of the Nerves and Muſcles, that cauſe theſe convulſive Motions

tions in the Epilepſy, come from an heterogeneous, and perhaps ſome malignant Acid, and the great and moſt neceſſary Buſineſs of the Phyſician in this Caſe, is to take away this noxious Acidity in the Humours. Alcalies therefore, which naturally abſorb this Acid, muſt be of ſome Uſe. Now as I have often upon ſeveral Occaſions, I muſt here inſiſt, that tho' Water be neither Alcali nor Acid, yet is the beſt Corrector of both. As it is acknowledged to be the beſt Imbiber and Diſſolver of Salts, it cannot well be denied to be the beſt Corrector of peccant Alcalies. And it is as plain, that Water has no perceivable Acid in it, and if we mix a good Quantity of Water, with the ſharpeſt Acid, that is not poiſonous, it will ſo correct the Acrimony of it, as to make it harmleſs, nay, and grateful too. And both theſe will follow from the harmleſs and innocent Nature of Water, ſo that it may be given ſafely in ſuch a Quantity as will abſorb any alcalious or acid Salts whatever.

Almoſt all Phyſicians, both ancient and modern, agree that theſe Epileptick Motions may proceed either from too much Heat, or too much Cold, from too great a Plethora, or too much Emptineſs, tho' generally I believe they proceed from

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too much Heat and Dryneſs, or too much Cold and Dryneſs, both which may proceed either from too much Fulneſs, or too much Emptineſs; the one violently ſtretching the Nerves beyond their juſt Tone, the other too much contracting the Nerves of any Part, either of which will beget a *Niſus in contrarium*, and conſequently be attended with Twitchings or Convulſions. Thus in the Stomach, the Hiccup may come by too long Faſting, eſpecially if no innocent Liquids be taken, as well as by drinking too much ſtrong Drink, or eating too great Meals, of high-ſeaſoned or ſpiced Meats.

That both proper Convulſions, and ConvulſiveMotions, and Tremors (which laſt are a Degree of Convulſions) may come from Cold is plain, from the Hands, that are ſometimes ſo affected with Cold, that they are unfit to handle or do any thing with them, and the Jaws ſo, that the very Teeth will chatter, and whether we will or no, ſtrike againſt one another. And there will be ſhivering, which is a leſſer Sort of Convulſion, in moſt Parts of the Body.

The Caſe ſeems to be the ſame in the Cramp, which generally takes thoſe that are ſubject to it in Bed, and when the Parts moſt ſubject are not well covered

vered with Cloaths, and their Bodies are very empty. And therefore they ſhould ward againſt this by eating ſomething for Supper, or drinking a Quantity of ſome innocent, actually or potentially, warm Liquor, or ſome Water, to keep the Blood and Spirits, or Liquid of the Nerves, warm and fluid; this Contraction of the Nerves and Tendons probably coming from the Dryneſs and Cold of thoſe Parts. So ſome are ſeized with dangerous Cramps by ſwimming too long in cold Water (eſpecially in a cold Seaſon) which occaſions their being drowned.

Nor is it any Objection againſt this, that great Drinkers and gouty and plethorick Perſons are ſubject to Cramps, (for that may happen for want of Spirits, or a due Quantity of the nervous Liquid) tho' they are ſeemingly ſo robuſt and ſanguine. And it is impoſſible it ſhould be otherwiſe, when the Blood of ſuch People is ſo hot, dry, and viſcid, that it cannot have an eaſy Paſſage thro' the Infinitely ſmall Veſſels of the Brain, where that fine Liquid is ſeparated from the Blood into the extream ſmall Pipes and Veſſels of the Nerves. Any one may ſee I am far from thinking that hot Drams, Wine, and ſtrong Ale give the moſt and the

beſt Spirits; and tho' they have their Uſe, both as to Food and Phyſick for the Body, and ſometimes to chear up and unbend the Mind, yet they will often want to be corrected by ſmaller Liquids, and particularly, ſometimes by Water.

That theſe Convulſive Motions ſometimes come from the Heat and Dryneſs of the Blood and Nerves, ſufficiently appears, from their being ſo common both in the Beginning and End of the Small-Pox, and other the moſt malignant Fevers.

From what has been ſaid, I may remark as to thoſe Convulſions that proceed from a Plethora, the Viſcidity of the Blood, the Heat and Dryneſs of the Nerves, and other ſuch like Cauſes, the Caſe is much the ſame as in Fevers, and if Water be good to cool and dilute the Blood in the one, it muſt be good in the other. Beſides, I have Experience, that the giving of Water in the Beginning of Fevers, even when they begin with Tremblings, Shiverings, and Rigors, which are a Sort of Convulſions, will ſooner leſſen or take off ſuch Symptoms, than they would go off of themſelves, or in the common Method of Practice.

And I have good Evidence, that the moſt violent Convulſions in the laſt Criſis of a Fever, when the Caſe was thought to be deſperate, have been ſometimes taken off by the giving of Water.

So far of Convulſions or Convulſive Motions that come from Repletion. As to thoſe that come from Inanition, or too much Evacuation, it may be more doubtful, if not altogether improbable, that Water ſhould be good for them.

In anſwer to this, I aſſert, that thoſe Convulſions that come from Emptineſs, and too violent Evacuation, by Blooding, Vomiting, or Purging, have as much need of diluting innocent Liquids as thoſe that come from a Plethora or Fulneſs. For the moſt liquid Parts of the Blood and Humours, are firſt and moſt plentifully drained of by theſe Evacuations, and conſequently the Body is left in a great Meaſure deſtitute of its due Moiſture, and the Nerves dry, and more apt to Convulſions. And I find the Phyſicians preſcribe moiſtening and diluting Things, even in thoſe convulſive Motions that proceed from that Cauſe.

That Convulſions may ſometimes come from Emptineſs of the Veſſels, I think

is plain from Animals newly bled to Death, after which there will be convulsive Motions, and they will continue for some time in several Parts of the Body.

Physicians, tho' they sometimes prescribe gentle Vomits and Purges, yet they all caution against violent ones; and 'tis particularly observed, that Convulsions upon violent Purges, especially Hellebore, are almost always Mortal.

And indeed it seems not very reasonable to cure Convulsions by raising Convulsions, as Vomits do in the Stomach, and Purges in the Bowels, and therefore I cannot but think that both Vomits, Purges, and violent Sneezing, and such like, are too violent Methods in this Distemper, and may increase the *Stimulus* upon the Nerves, while they pretend to remove the Matter that stimulates the Nerves, Muscles, Tendons, &c. and I should think the use of innocent Anodynes and Alterants, especially those that may be given in a Quantity would do better. And therefore Opium is one of the last Things that some prescribe in this Distemper, which perhaps may do good because it operates by stupifying the Nerves. I only doubt whether it may safely be given in such a Quantity as to do the Work; and I am apt to think, that

that Water, though I have not known it tried, would eaſe Pain as well and perhaps ſafer and better than Opium it ſelf. As to what I have ſaid before, I obſerve that Dr. *Willis* does not approve either of ſtrong Purges, or much Blooding, nor Sneezing, nor the ſtrong Cordials, nor Cupping with Scarification (to be ſure theſe cannot be good when the Diſeaſe proceeds from Emptineſs and too much Evacuation) becauſe, ſays he, theſe fire the Spirits, and irritate the Nerves and Fibres, and cauſe what he calls Exploſions.

And this brings to my Mind the Account that the ſame Dr. *Willis* gives of theſe Epilepticks and convulſive Motions, that the Matter that irritates the Nerves cauſes certain Exploſions of the Animal Spirits, that bring theſe irregular and convulſive Motions; ſo that it is plain he places the cauſe of this Diſtemper only in the diſorderly Motions of the Animal Spirits in the part affected. He ſuppoſes ſome Heterogeneous Matter, ſome *Nitroſulphureous* or *Spirituoſaline* Particles, mixed with the Spirits, that perhaps like Gun-powder cauſe theſe Exploſions, that beget theſe Epileptick Motions. But as this Account depends upon a Notion that the Animal Spirits are a Liquid that conſiſts of ſpirituous

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and fiery Particles, and has been a common Notion as appears by the Method the World has generally taken to raiſe the Spirits, to drink a deal of ſtrong Ale, Wine, or Brandy, which has brought many into Epilepſies, but I believe never cured any, I ſay this I cannot much approve. But if there were any ſuch thing, as Water is good to quench Fire, perhaps Water might quench the Nitro-ſulphureous Particles, and prevent theſe Exploſions, as wetting Gun-powder will prevent its Exploſion.

Doleus thinks that there is ſome Elaſtick Matter got into the Nerves, that by its Elaſticity and Expanſion cauſes theſe irregular and convulſive Motions in the Nerves and Muſcles. Now Air is the moſt Elaſtick Body we know, and ſome Philoſophers, particularly Dr. *Morgan* in his late Book, ſays, there is Fire and Air in all Bodies, and if we can ſuppoſe too great a Quantity of Air in the Nerves, and that by its Elaſticity to be expanded by Heat, or if after too great Evacuations of more ſolid Matter the Air in the Veſſels be left to it ſelf, it may perhaps be more apt to be expanded and give ſome trouble to the Nerves and Muſcles of the Body. Now if we can ſuppoſe any ſuch thing, Water may be very proper to damp this Elaſticity, it being

being certain that the Air is leſs Elaſtick when it is cold and moiſt that is in rainy Weather, than when it is hot and dry; and what effect this Elaſticity of the Air may have within as well as without the Body is more than I can tell. For the modern Philoſophers tell us ſtrange Things of this Elaſticity of the Air, that a Cubick Inch of common Air may be expanded ſo, as to fill whole Regions: And if ſuch an Elaſticity be ſet to work in the Body, eſpecially in the tender Nerves, no Body knows what may come of it. Now Water may be evaporated, but cannot be compreſſed into leſs room, nor expanded into more than it naturally takes up, and ſo may be fit enough for the purpoſe of taking off the Expanſion of any Elaſtick Matter.

I ſhall obſerve further, that Sudorificks are particularly recommended by many Phyſicians, ſuch as *Sylvius*, Dr. *Willis*, and Dr. *Pitcairne*, &c. and I think with very good Reaſon, for they are certainly the leaſt violent Method of carrying off the morbifick Matter, and the moſt univerſal. And they particularly recommend Sweating with Guaiacum Wood, or rather the Bark of Guaiacum. Now when a Doſe of Water taken in Bed will give as plentiful and a much

much more eaſy Sweat, than that or any other of the hot Sudorificks, I think it muſt do as well, if not better, in this Caſe, eſpecially when theſe Convulſions proceed from a Plethora or Fulneſs of Blood and Humours, as I believe they moſt generally do; for it is eaſy to obſerve, that thoſe that are moſt ſubject to Epilepſies, or the Falling-Sickneſs, are People of a robuſt, ſanguine, and plethorick Conſtitution.

As for thoſe that think theſe Convulſions often proceed from a phlegmatick and pituitous Conſtitution, and that the Nerves are thereby extended as to their Latitude, and conſequently contracted as to their Longitude, I ſhould think this ſhould rather incline them to a Palſy than Epilepſy; however, Water is as good to dilute and digeſt Phlegm, as it is for other Intentions. As for thoſe that define Convulſions to be painful Contractions of the Nerves and Muſcles, 'tis to be meant of proper Convulſions that fix the Part convulſed, which are moſtly very painful; but in convulſive Motions, there is moſtly no Pain at all.

I knew one that in the Small-Pox about the eleventh Day, for ſix or ſeven Hours together, fell every Quarter of an Hour into ſuch violent Convulſions as were terrible to all about him, and made

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his beſt Friends and Relations pray for his Deliverance by Death out of that miſerable (as they thought) Condition; but happening to recover, he declared he was ſenſible who were about him, and repeated ſome Things that were ſaid, and that neither in the Fits nor Intervals he had any Pain at all.

I confeſs almoſt all the foregoing Accounts are to me very uncertain, only I mentioned them to ſhew that upon ſuch Suppoſitions Water may be as likely to work the Cure as any of thoſe Things, whether Animal, Vegetable, or Mineral that are commonly truſted to, or counted Specifick in this ſad Caſe.

Galen and others give Inſtances of People before theſe Convulſions, that have plainly felt like ſome cool Air to proceed from the Foot to the Head; and they tell us that a ſtrong Ligature upon the lower Parts will prevent the Proceſs of the Convulſion. This muſt be only a *Deceptio ſenſus*. For it is impoſſible that any Matter in the Nerve ſhould take ſuch a Courſe, but it muſt proceed from ſome Elaſticity in the Nerve, whereby one part of the Nerve communicates Motion by ſome Tenſion or Contraction to another, and ſo on with a ſort of Vermicualar Motion, ſomething like that of the Periſtaltick Motion of

the Bowels ; for I cannot think that the Animal Spirits are ſuch turbulent Things as to produce all thoſe dreadful Diſturbances in the Body, that are laid to their Charge by Dr. *Willis* and others, but that the chief Uſe of the Liquid of Nerves, is to keep the Nerves in a due Temper for the various Animal Operations. And it ſeems plain to me, that when the Nerves are either too hot and dry, or too moiſt and lax, they will be unfit for thoſe Purpoſes ; when they are too dry, which they will be by a preter-natural Heat, they will not be capable of a due Extenſion ; and when too moiſt and lax, they will not be capable of ſo ſtrong a Contraction as is neceſſary to the exerting the Animal Motions. The Antients, and ſome of the Moderns, think to explain this by the Similitude of a Viol-ſtring, eſpecially of the ſmaller ſort, that if it be left ſtrait ſtrung, if there be any very conſiderable Alteration of the Weather, either to dry or moiſt, will certainly break, though I think this Inſtance does not reach the Caſe, yet it may give us ſome Notion what effect too much Heat and Drineſs, or too much Cold and Moiſture may have upon the Nerves. I fancy we are ſtill in the dark, there muſt be ſome ſuch Make of the Nerves that they are capa-

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ble by a Stimulus or Preſſion, &c. to be put into a violent vermicular or oſcillatory Motion, which very much affects the Part where it begins, and by the Continuity of the nervous Syſtem is at laſt communicated to the Brain it ſelf, and diſturbs it. For it is plain, the Epilepſy moſtly proceeds from other Parts to the Brain; but the true and certain Account of this, is perhaps impoſſible to be known.

Sennertus thinks there is ſome poiſonous Matter that is the Cauſe of theſe Epileptick Motions, but does not tell us what, nor where it is, nor whence it comes, nor whether it be within or without the Nerves, and ſo we are not much the wiſer for it. I am apt to think the ſtimulating Matter that cauſes moſt ſorts of theſe convulſive Motions, may as likely be without as within the Nerves. When there are ſuch various Cauſes aſſigned for the Epilepſy, it will be hard to find any Specifick for it, and for ought I can ſee Water may bid as fair as any of the moſt celebrated Anti-epilepticks.

The more famous Simples are from Animals, the Spirit of Humane Blood, or a Man's Skull, or the Shavings of it, or the Moſs that grows upon the unburied Skull of a Man, but then we muſt be ſure he died a violent Death, or 'tis

worth nothing. The Tooth of the Hippopotamus, Caſtor, Peacock's-Dung, Elk's-Hoof, Swallows, &c.

Among the Vegetables, Male Piony, eſpecially the Seeds, but then it muſt be gathered juſt at Noon, and when the Sun is in ſuch a Sign. The Viſcus or Miſſeltoe of the Oak, but that of the Hazle muſt be better, becauſe 'tis rarer. Of this, if I miſtake not, we have a Treatiſe by a learned Phyſician. Oil of Box-wood, Flowers of Lilly of the Valley, Flowers of the Teile-Tree, wild Valerian, which ſome ſay will cure the Epilepſy at twice taking, and 'tis not unlikely, if the Diſtemper proceed, as *Sennertus* thinks, from ſome poiſonous Matter, becauſe it is believed to be good againſt Poiſon, particularly that from the Bite of a mad Dog, and in the Plague.

Minerals, Cinnabar of Antimony, Vitriol, Amber, &c.

Theſe, with others their Preparations, Compounds, and Decompounds, are famous for this Diſtemper. And ſo far as they are confirmed by good Experience, they may do very well, tho' we know nothing how they work the Cure.

And thus after all our Reaſoning from ſuppoſed Cauſes, we muſt depend upon Experience.

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The Hiccup I am ſure Water will cure, and not unlikely any Epilepſy, (if any ſuch there be) whoſe Cauſe is in the Stomach.

Dr. *Short* aſſures us, that Water will cure the Palpitation of the Heart, and gives us an Inſtance in himſelf, when he had it for eleven Months, and nothing would cure it till he drank Water.

I know by long Experience it will cure the Cholick.

I am apt to ſuſpect there are few bad Cholicks but are joined with more or leſs of theſe convulſive Motions.

I wiſh it were tried in Hyſterick Convulſions, I fancy it would have a good Effect, both to prevent and cure them.

'Tis recommended by *Hippocrates* to waſh with Water for the Tetanus, if it will cure that, for the ſame Reaſon it muſt be good for all proper Convulſions, in the ſeveral Parts of the Body, and to drink it as well as to waſh with it.

As to the Epilepſy, I have (*Feb. Mag. Edit.* 7. *Pag. ult.)* given an unexceptionable Inſtance of a Knight that was troubled with Epileptick Fits, and could not be cured by any Means, till he drank Water (as far as I underſtood him he did

did not wholly leave off Wine) I had this, ſince my *Febrifugum Magnum* came out, from his own Mouth.

I will conclude with a Paſſage of Sir *John Floyer*, who tells us, *Celſus Aurelianus* preſcribes Swimming in Water to prevent the Epilepſy. I may add, and why not drinking Water. And he adds this Note, That ſince Wine, hot Diet, hot Baths, occaſion Fits of the Epilepſy, we may rationally try their Contraries, cool Diet, Water Drinking, and cold Bathing, and waſhing the Head with cold Water to prevent the Fits.

Of the CHOLICK.

I Am ſo far ſatisfied, that the taking of cold Water, either with Exerciſe after it, Walking or Riding, either in a Coach, or on Horſeback, or taking it in Bed, is a good Cure for the Cholick, that I think fit to add to what is ſaid in *Febrifugum Magnum*, what follows.

Some of the Gentlemen that anſwer *Febrifugum Magnum*, are pleaſed to ridicule

dicule what Dr. *Hancocke* propoſes, of drinking a Quantity of Water with the Uſe of various Motions, expreſſed in that Book. But tho' I have never tried it my ſelf, yet I have known thoſe that have tried it with Succeſs fifty Years ago. And ſince that Book came out, I have good Information of a Gentleman frequently troubled with the Cholick, that cauſed an Engine to be made, ſo that he might with Eaſe alter his Poſture, and particularly be with his Head downwards, which, whatever ſome may think or ſay, muſt be a good Means to open Obſtructions in the Bowels, or to remove any Matter that may cauſe thoſe Obſtructions.

Paracelſus thinks certain malignant Salts diſſolved and put in Motion are the Cauſe of the Cholick; now all agree there is nothing better to correct or abſorb all Sorts of Salts than Water.

Vanhelmont aſſigns a certain dogged Acid in the Stomach and Pancreas to be the Cauſe of the Cholick. Now we know there is nothing better to take off the Sharpneſs of Acids than Water.

Dr. *Willis* ſuppoſes the Cholick to proceed originally from the Brain, by the violent Efflux of the Animal Spirits

rits upon the Nerves of the Meſentery (and theſe joined with the Particles of the Blood) by ſwelling and diſtending the Veſſels cauſe Cholick Pains.

And with him agrees *Doleus*, and goes ſo far as to ſay, that this may happen when the Bowels are not ill affected, and thinks he proves it by the Caſe of thoſe that are Sea-ſick, and that have Epileptick Fits. But he ſhould firſt have proved that Epileptick Fits begin firſt in the Brain, and that ſuch a rolling Motion as that of Sea-faring Men cannot affect the Stomach and Bowels as well as the Head, which is contrary to Experience in many Caſes. For my Part, I think, ſuch a mild and gentle Liquid as I think the Animal Spirits to be, can hardly work ſuch Wonders. And beſides, I would have it tried, whether drinking a good Quantity of Water juſt before we imbark, and a while after, would not cure Vomiting at Sea, as well as it does at Land, or prevents the turning of the Humours by that Jumble to that porraceous Matter that comes up with Sea Vomits.

But ſuppoſing what Dr. *Willis* and *Doleus* ſay is true, if Water be good for ſo many Diſtempers of the Head, which are generally attributed to the Indiſ-

Indiſpoſitions and irregular Motions of the Animal Spirits, as, I think, I have made it probable, and particularly for Epileptick Fits. I do not know but if the Cholick any Time proceed from the irregular Motions of the Animal Spirits, Water may upon that Suppoſition be good for it.

Sylvius ſuppoſes the Cholick comes from the Bile, and a very acid Pancreatick Juice, mixed with a pituitous Matter, and that from ſeveral Sorts of theſe Mixtures, proceed the ſeveral Sorts of Pains, that are taken Notice of by Phyſicians. Now it's plain that Water is good to correct the Bile, to lenify the too ſour pancreatick Juice, and to dilute any pituitous Matter, and to waſh it from the Sides of the Veſſels.

Some attribute the Cholick to a bilious Humour, mixed with a biting pricking Salt. Water is good, both to diſſolve the Salt, and correct the Heat and Sharpneſs of the Bile.

Sometimes the Cholick proceeds from the Scurvy. Now I have aſſerted before, that Water drank pretty plentifully, either in Bed, or out of Bed, with Exerciſe after it, is a good Cure for the Scurvy, and ſo for the Cholick, if it proceeds from that Cauſe.

Cholick Pains, when very violent, ſometimes end in a Palſy, Epilepſy, or Gout. If Water be good for all theſe, as, I think, I have made it probable, then it muſt be good for ſuch a Cholick, and probably to prevent theſe ſad Effects of it.

Willis commends ſeveral hot Simples, boiled in common Water, but obſerves that theſe hot Fomentations ſometimes do Hurt (that muſt be when they move the Humours, but do not remove them) nay, he approves a Fomentation with cold Water, as *Septalius* did, who gives us two Hiſtories of Cures wrought with it. *Doleus* obſerves the ſame.

Sylvius cures the hot bilious Cholick (which certainly is the moſt common) with cooling Acids, and aqueous Things.

Doleus very much commends cooling Things, and tells us, he cured a Man very near Death, with only preſcribing the Uſe of Tamarinds, and does not approve of very ſtrong Glyſters and Purges, for they often increaſe the Pain, and haſten Death, as *Wepferus* has obſerved.

Riverius ſeems to ſuppoſe, that thoſe Flatus's that cauſe the Cholick, proceed from the cold Temper and Indiſpoſition of the Stomach and Bowels, but I fear that which he calls a cold, is an hot Temper, or at leaſt originally proceeds from Heat, as ſeems to me plain, from what

what we obſerve, that Perſons that have the Cholick, are moſtly much bound, and their Feces hard, which Perſons of an hot Conſtitution are moſt apt to be, ſo it is moſtly in Fevers.

The Cholick ſometimes proceeds from Worms, Tumours, and Abſceſſes, in the Bowels, by an Inflammation, now Water is very good to prevent any ſuch Inflammation of the Parts, as may beget theſe. None I hope will deny, that Inflammations come from the Obſtruction and Stagnation of the Blood and Humours, in the Parts where they are, and that they proceed from Heat *. Perhaps Water may be the beſt and ſafeſt Thing to be given in this Caſe, where chirurgical Operations and Medicines, that diſcuſs, or ripen, and ſuppurate cannot take Place. I have Inſtances of cold Water curing a ſtubborn Ulcer, where the Surgeon failed, and even a Gangreen in the Leg, when a Conſult of Phyſicians and Surgeons had agreed to have it cut off the next Day. And for Worms, to drink a deal of Water will certainly keep them under, and prevent ill Conſequences, till they can be killed and carried off by other Means.

* Dr. *Helvetius* thinks Inflammations in any Part proceed from the Blood forcing into the Lymphatick Arteries, ſtill Water muſt be good both to vent and cure them, by cooling the Blood, and promoting a due Circulation in the Lymphaticks.

There ſometimes is a contagious and peſtilent Cholick, of which *Ægineta* gives us an Inſtance in *Italy*, and tells us, that a certain *Italian* Phyſician cured it with cooling Diet and Medicines, and particularly with preſcribing the Drinking of cold Water.

The bilious hot Cholick is moſt painful, and is often joined with great Thirſt and a Fever, then it certainly is increaſed by hot, and helped by cooling Things, and then certainly Water is good to take off the Fever, and quench the Thirſt, and probably to cure ſuch a Cholick.

As to the Cure, tho' *Riverius* preſcribes a great many hot Medicines, yet he ſometimes preſcribes cooling Things, as red Poppey (if that be cooling) Lettice, Endive, Sorrel Waters, Syrup of Violets, Apples, and Lemons, *&c.*

When there is great Thirſt (and a Fever with it) he ſays cold Water is to be given as *Galen* teaches, *lib.* 12. *de Meth. cap.* 7. And he cites *Amatus Luſitanus*, who ſaith he had by the uſe of cold Water, cured Cholick Pains ſo eaſily and ſpeedily, that it looked like a kind of Charm. And tells us *Septalius* aſſures us, that he had uſed cold Water in Cholick Caſes, both by Drinking and Waſhing, with great Succeſs; and that he

he gives us two Hiſtories of the Cures he had done with it, *Lib.* 7. *Animad. Prac.* And when the Cholick turns to a Palſy, he preſcribes a Bath of Water made with Emollient Herbs, often repeated.

Henricus Regius (who I obſerve comes in the Cure of many Diſtempers, neareſt the cool Regimen of any modern Phyſician that I have ſeen, that wrote ſo long ago) for the Cholick preſcribes a Glyſter of the Roots of Marſhmallows, the Leaves of Mallows, Marſhmallows, Violets, Lettice beet, of Camomile Flowers, Linſeed, Fenugreek, moſt of which are cooling, together with a Bath of Mallows, Violets, *&c.* And indeed a Decoction of Camomile, Herb and Flowers is ſpoke of by moſt Writers as a moſt powerful Medicine, and a kind of Specifick in this Diſtemper; and 'tis likely it is very good, eſpecially in that which proceeds from Wind and Vapours.

Sennertus tells us, that in thoſe Cholicks that proceed from hot and ſharp Humours, moiſtening and cooling Things are to be uſed, and that if the Body be bound it is to be opened by relaxing and moiſtening Things, and conſequently not with ſtrong Purges and Glyſters only. Now I believe the Cholick moſtly proceeds (eſpecially the dry Gripes) from hot

hot Cauſes, and that Water taken in a Quantity is the beſt thing, better than even Oil it ſelf to cool the Heat, and lenify the ſharp Humours in the Bowels, and open Obſtructions.

He cites *Trallian* likewiſe, an antient Phyſician, who in this Caſe commends the drinking of cold Water, if Strength remain, and the internal Parts are ſound.

And *Ægineta*, another antient Phyſician, who writes of a certain *Italian* Phyſician, who cured a Peſtilential Cholick with cooling Diets and Medicines, and particularly with preſcribing the drinking of cold Water.

And he cites ſome more modern Phyſicians, as *Amatus Luſitanus*, *Cent.* 1. *Cur.* 48. and *Cent.* 7. *Cur.* 12. And *Foreſtus*, *Lib.* 21. *Obſ.* 12. he ſays theſe not only preſcribed to drink cold Water, but ordered a Linen Cloth dipt in Water, and wrung a little, to be laid to the Belly, with good Succeſs, when hot Things not only did no good, but did hurt. And he obſerves, that many Phyſicians attempted to cure the Cholick with cooling and relaxing Medicines, and that when there is an Inflammation hot Things are dangerous, and particularly he recommends the eating of Prunes and Tamarinds, with the laſt of which *Doleus* ſays (as I noted before) he cured a Cho-

a Cholick, when the Man was almoſt at the Point of Death.

Dr. *Burnet* in his large Collection of Cures, taken from a Multitude of Phyſicians, who have publiſhed their own Obſervations (which by the Way are by ſome good Phyſicians counted the very beſt Phyſick Books that are) has ſeveral remarkable Stories.

He tells us many Phyſicians, and particularly *Foreſtus*, do not approve of ſtrong Purges nor Glyſters, till the Matter be diluted and attenuated with Oils, with Manna, and other relaxing Medicines, of which I believe Water is the very beſt. And here I obſerve, that I find many Phyſicians aſſert, that an Ounce of Manna, with two Ounces of Oil of ſweet Almonds hath been known to cure the Cholick, when the ſtrong Purges and Glyſters would do no good.

He tells us, *Foreſtus* himſelf uſed Water, and cites theſe Words from him, *I know that I have not only removed the Pain with Water, but the Diſeaſe too, and hindered it from returning again.*

He cites *Amatus Luſitanus*, *Cent.* 1. *Cur.* 2. where he tells us of a Woman that by the drinking of cold Water was cured, as it were, by a Charm, and the Cholick returned no more.

The great *Crato*, chief Phyſician to three Emperors, confeſſes many Phyſicians gave Water for the Cholick, but I ſuppoſe he did not uſe it himſelf, for he ſeems to have the ſame Hydrophobia upon him, that many Phyſicians have now.

The fore-cited *Amatus Luſitanus* cured the Son of one *Falco*, with drinking Water, and a Linen Cloth dipt in Water and laid to his Navel.

And *Zacutus Luſitanus* cured a Boy that had a very bad Cholick, with preſcribing to drink Water, and with a Plaiſter of Snow laid upon the pained Part, the Boy in an Hour's time cried out he was well.

When the Cholick turns to the Palſy, many commend a warm Bath of Water and Emollient Herbs; I do not ſee why cold Bathing would not do better, eſpecially if we go to Bed and Sweat after it, certainly the ſafeſt and eaſieſt Way of taking Water for the Cholick, is in Bed, and if we can Sweat after it, the Cure will be more eaſy and certain.

I have had good Information of ſeveral Inſtances of the Succeſs of curing the Cholick with Water ſince *Febrifugum Magnum* came out; and particularly, I know a Man, that has occaſion to be much out in the Fields and Woods in the Cold, and is frequently troubled with

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the Cholick, and happening to try it, upon reading that Book, now uſes nothing elſe, takes it in Bed, and it never fails to cure him.

There are many Phyſicians that very much commend Opiates, and they are certainly very good to eaſe Pains, but others think they are not to be given when Nature is much weakened, becauſe, ſay they, Opiates fix the Humours, and make them harder to be removed, and in deſperate Caſes, haſten Death. However the Patient has the poor Comfort of a more eaſy Death.

The laſt Remedy is Gold, Silver, or Leaden Bullets, or a Quantity of crude Mercury, ſeveral Ounces, and ſometimes to half a Pound, but of that I ſhall ſpeak under another Head.

To prevent that troubleſome and ſometimes dangerous Pain of the Cholick, I am pretty ſure, there is nothing better than to drink half a Pint of Water once or twice a Day. Particularly in a Morning, and either two Hours after Dinner, or at Night when we go to Bed. And this I doubt not would ordinarily prevent not only this but moſt other Diſeaſes of the Bowels, and particularly thoſe Inflammations and Obſtructions that are the Cauſes of the moſt dangerous Cholicks. I have

Experience in my ſelf, I was all my Life before troubled with it, but have not had it theſe twenty or thirty Years, *i. e.* ſince I drank Water, more or leſs every Day.

The common Preſcriptions for the Cholick, moſtly conſiſt of very hot Things, hot Spirits, or Aromaticks, and for the Wind Cholick they may be good, and if they put the Wind in Motion they may remove it, tho' I am ſatisfied that Water is much better to expel even Wind it ſelf. But for the hot bilious Cholick, eſpecially if it be joined with a ſour pancreatick Juice, they cannot be good. But Water will correct and abſorb both the bilious Salts and Acids. If the Cholick proceed from phlegmatick Humours, or a tough viſcid Phlegm, hot Things will dry up the watery Part, and make it more viſcid, and harder to be removed, but Water will dilute it, and make it more eaſy to be carried off by any gentle Purgative. If the Cholick proceed from any Obſtruction, by any Concretion of obſtructing Matter in the Bowels, ſuppoſe old Cheeſe, Cherry-ſtones, *&c.* (as we have ſome Examples in Authors) hot Spirits and Aromaticks will rather make it worſe, but Water will by Degrees diſſolve and ſeparate ſuch Concretions,

tions, eſpecially if given (as it may ſafely be) in a Quantity, and if the Cholick be very bad, prevent any ſuch Inflammation of the Bowels, as may beget any Abſceſs, Ulcer or Gangreen. If there be already any ſuch Abſceſs, Ulcer, or Gangreen, all ſuch hot Things are not only uſeleſs but dangerous. But Water may ſafely be given, and perhaps it is in that Caſe the beſt Thing that can be given, better than Oils and Balſams, which perhaps will not reach the Sore, which Water, if given in a Quantity, will certainly do, and do ſomewhat towards ſtopping the Flux of Humours, to the Place affected.

If the Cholick be Nervous, and lie not in the Cavity, but in the Coats of the Bowels, or in the Meſentery, I am of Opinion that Water will be very good to quiet the Spirits, and ſettle the Nerves in their natural State of Tenſion and Contraction, and that much better and ſafer than Opiates themſelves, which take away Pain only (at leaſt as I think) by ſtupifying the Nerves, and dulling the Senſe; and therefore, tho' ſome Phyſicians admire them, yet many adviſe to give them with great Caution, becauſe they think they rather fix the Humours than remove them, and often do more Hurt than Good. And

indeed as Water gives a more natural and quiet Sleep than any Opiates, ſo, for ought I can ſee, it may be better and ſafer, to take off the Pain of this Nervous Cholick, than any Opiates whatever. Whether theſe Aſſertions may ſeem probable to others, as they do to me, I know not, nor am I much concerned, for I depend upon ſo many Experiences, that in Caſe of the Cholick, I would take Water my ſelf, or recommend it to any one who would take my Advice, before the very beſt of thoſe ſpirituous or aromatick Preſcriptions, we find in any modern Authors.

Of the Ileus, *or* Iliack-Passion.

THE Ileus, or Iliack-Paſſion, is only the worſt Sort of Cholick, where the periſtaltick Motion is inverted, and the Humours, inſtead of being carried downwards, work upwards, and inſtead of coming out by Stool, come out by Vomiting at the Mouth. Sometimes only the indigeſted and corrupted Humours, and ſometimes the Feces themſelves are voided upwards.

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The common Opinion is, that this is occaſioned only by a greater Obſtruction, which forces Nature to change its Courſe. If this begin in the Stomach it is a common Vomit, if at the Entrance of the Ductus Cholidocus, the Cholera Morbus, if in the ſmall Guts, particularly at or about the Cæcum, it is called the Iliack-Paſſion, or Ileus. But it is plain it may, and ſometimes does begin in the Colon; nay, at the very extream Part of the Rectum or Straight Gut, which is ſometimes ſo contracted, that the ſmalleſt Things cannot enter. What is the true Cauſe of the periſtaltick or vermicular creeping Motion of the Bowels is perhaps hard to gueſs, whether it be the Weight of the ſuperior Parts preſſing upon the inferior, or the reciprocal Contraction and Tenſion of the circular, longitudinal, and as ſome think, a Kind of ſpiral nervous Fibres, they ſuppoſe to be in the Bowels, is hard to ſay, but it muſt be ſome ſuch natural convulſive Motion, as ordinarily works downwards, but may ſometimes, as it does in the Ileus, work upwards. That the Ileus and the Inverſion of the periſtaltick Motion does not always proceed from Obſtructions in the Bowels is plain, in that Glyſters, and even Suppoſitors, have been

been known to be carried with great Violence, and in a little Time, thro' the Bowels and Stomach to the Mouth, which is a certain Sign there was then no Obſtructions in the Bowels. See *Riverius* and *Sennertus de Ileo*, and in that Caſe there wants nothing to the Cure, but the Return of the periſtaltick Motion to its natural Courſe, if we could but tell what would do it.

The Cauſes and Cure of the Ileus or Iliack-Paſſion are commonly thought to be much the ſame, only they are ſuppoſed in the Ileus to be in a greater Degree. And the laſt Remedies in both are ſuppoſed to be either ſwallowing Bullets, or crude Mercury. That both theſe have been ſometimes effectual, we have the Teſtimonies of ſo many Phyſicians, that we ought not to doubt of it. But particularly, as to crude Mercury, all, as far as I can ſee, think it a dangerous Medicine, and that it either cures or kills, as it paſſes or not, and therefore it is not to be given but in deſperate Caſes, when there is no Hope from any Thing elſe, and where the Patient may poſſibly live by it, but muſt die without it.

I think, whoever preſcribes either of theſe fore-mentioned Remedies, either

Bullets,

Bullets, or crude Mercury, ought to be well aſſured, that there is no Schirrus, or Abſceſs, or Ulcer, or Gangreen, or any ſuch Inflammation in the Bowels, as may probably cauſe any of theſe, nor any ſuch violent and cloſe Contraction in any Part of the Bowels, as has been obſerved by ſome Phyſicians, in the Anatomy of ſome Perſons that died of this Diſtemper, even where there has been found no Concretion of obſtructing Matter. In any of theſe Caſes, either Bullets or crude Mercury will probably make tearing Work, and be ſo far from curing the Patient that they will but kill him the ſooner. And therefore, notwithſtanding all the fleering Ridicule of ſome that have anſwered *Febrifugum Magnum*, a Quantity of ſuch an innocent Liquid as cold Water, will be an as effectual, and much more ſafe Remedy, for opening the Obſtructions both in the Cholick and Ileus, where they proceed from that Cauſe, than either Bullets or Mercury. And as to their Weight, by which they are ſuppoſed to make their Way through the Bowels, a Pound or Pint of Water is juſt as heavy as a Pound of Mercury, or Leaden Bullets. And whether the Patient have been uſed to drink Water or not, if one Pound be too little, he may add two

or

or three more, provided he do it with Diſcretion, taking a few ſmall Draughts at firſt, and this with leſs Danger, than what is commonly done, to drink four or five Pints of your dogged mineral Waters, and to my Knowledge it will paſs as eaſily and quickly as the Steel Waters will do. And if there ſhould happen to be any Inflammation, Ulcer, *&c.* in the Bowels, it will be ſo far from doing any Harm, that I believe it will be the beſt Thing that can be done for them, as I have ſaid before.

And becauſe it is plain that there may be an Ileus, where there is no Obſtruction in the Bowels, as appears from no leſs than three authentick Inſtances cited by *Sennertus*, I muſt add, that I think a great Quantity of ſome innocent Liquids, drank is the likelieſt Way to turn the periſtaltick Motion of the Bowels downwards, and to ſet it right, and that a Quantity of common Water is the likelieſt Liquid to do it, which cools, and yet does not too much relax the Nerves and Fibres, and by its Weight bears the Bowels downwards.

And one of thoſe Inſtances *Sennertus* gives, is from *Mattheus de Gradibus*, of a Girl of twelve Years of Age, that for three Days vomited up Glyſters and

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Suppoſitors, as well as all ſhe took, at the Mouth, but was at laſt cured by continuing to drink a great deal of fat Broth. I am ſatisfied Water would have done it ſooner and better, becauſe Water is the beſt Thing to ſtop Vomiting, and fat Broth the beſt Thing to provoke it. However ſuch a Quantity of Liquids at length turned the periſtaltick Motion to its right Courſe.

I need ſay no more of the Iliack-Paſſion, ſince it is in Effect the ſame with the Cholick, and is diſtinguiſhed from it only by the Inverſion of the Periſtaltick Motion, and a very bad Cholick ſometimes ends in it. I will only add one Thing, that ſince I have by long Experience known that common Water is good to ſtop Vomiting, which when it is natural, and not procured by Phyſick, is but a Kind of Cholick in the Stomach, and ſince it is good to cure the Cholera Morbus, which is but a Kind of humorous Cholick in the upper Bowels, the Duodenum or Jejunum, and ſince I am very ſure from my own and others Experience that 'tis good for all Sorts of Cholicks, whether Nervous or humorous, whether in the Cavity of the Bowels, or in the Meſentery, and the nervous Coats and Fibres of the Inteſtines, I have no Reaſon to

doubt but it is good in the Iliack-Paſſion, even when the periſtaltick Motion is inverted, wherever the firſt Indiſpoſition lies, whether in the Ilia, or ſmall Guts, the Colon, or in the Rectum or loweſt Gut, eſpecially if it be taken in a good Quantity.

Of COSTIVENESS.

SINCE the Cholick and Iliack-Paſſion are almoſt always joined with Coſtiveneſs, and ſometimes when it is extream, and of long Duration, may proceed from it, before I leave this Subject, I will ſay ſomething of it.

1. As far as ever I could obſerve, thoſe that are rather too much bound, have generally better Health than thoſe that are apt to Looſeneſs, and upon frequent Occaſions to fall into a Diarrhea. Tho', as far as we can, we ſhould avoid both Extreams.

2. That I do not look upon it the beſt Way to be always taking Phyſick for this Diſtemper, but to do it only upon great Occaſions, when we find apparent Inconveniencies by it. For when

when we uſe ourſelves to it, it will ſignify very little.

For Purges. It is obſerved of Rhubarb that it leaves a binding Quality behind it, and 'tis true more or leſs of all Purges, eſpecially the ſtronger and more violent ones, they empty the Bowels, and when they are often uſed, upon no greater Occaſion than a little too much Coſtiveneſs, the Bowels will contract themſelves, and as long as the hot Temper of the Blood and Juices are not altered, will be more apt to this Diſtemper than they were before. And the Caſe is the ſame with Glyſters and Suppoſitors, if we accuſtom ourſelves to them when we want a Stool, it will make Nature ſluggiſh, and is the ſure Way never to have a Stool without them.

This is true alſo of the common gentle Laxitives, tho' they may do very well, and do a great deal of Good ſometimes, yet if we think to keep our Bodies ſoluble by the conſtant Uſe of any of them, we ſhall find ourſelves miſtaken, and they will ſignify juſt nothing, and particularly Oils, tho' upon Occaſion very good, yet if uſed too long and too much, and mixed with the Juices, they will prove very great Obſtructers, as we ſee in ſeveral Sorts of Machines,

Clocks, Watches, &c. a little Oil does well, but too much clogs the Wheels, and hinders the Motion.

I my ſelf have been (as thin People often are) as much troubled with this Diſtemper as moſt are, but never found any great Inconvenience in being without a Stool three or four Days, nay, I have been ſometimes a Week, and once three Weeks without one, and yet to Appearance well. This is nothing to the Hiſtories we have in Authors.

If therefore any that are troubled in ſome Degree with this Diſtemper, would take a good Glaſs of common Water once or twice a Day, their Coſtiveneſs would never hurt them. Tho' it does not immediately promote going to Stool, it keeps the Bowels cool, and the Feces moiſt, and cools the Blood, the Heat of which, in its Circulation thro' the Inteſtines, is the great Cauſe of Coſtiveneſs.

'Tis a common Objection that Water binds, this it does no other Way than by keeping the Blood cool and fluid, promoting Perſpiration and Urine, and conſequently Nature has leſs Occaſion for Evacuations by the Inteſtines, but that it ſhould directly bind the Body, which muſt be either by contract-

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ing the Bowels, or heating and drying the Feces, is impoſſible.

Since I knew the Uſe of Water, I have often given my ſelf a Stool, when I have been without one three or four Days, only by a good large Draught of Water, let down as quick as I could, and ſtanding or walking a while after it.

Of a Diarrhea, *or* Looſeneſs.

OF the ſeveral Sorts and Cauſes of a Diarrhea, I ſhall ſay nothing, becauſe they will come in as I go along, in the Obſervations I am to make upon what is ſaid by ſeveral Phyſicians, upon this Diſtemper.

To begin with Dr. *Pitcairne*. He treats of a Diarrhea, Lienteria, and the Cœliack Paſſion, in the ſame Chapter, becauſe he thinks the Lienteria proceeds only from Want of Concoction in the Stomach, and the Cœlaick Paſſion from the Obſtruction of the Lacteal Veins. But I think both may proceed from Want of Concoction, in the Lienteria, becauſe the Stomach doth not retain the Aliments at all, in the Cœliack Paſſion,

not

not long enough to comminute them ſufficiently to paſs the Lacteal Veins.

And this ſeems to proceed from the too much Relaxation of the Pylorus, ſo that either it cannot retain the Aliments at all, or not long enough to perfect the Comminution and Concoction. For that which he ſuppoſes of a ſtrumous Obſtruction of the lacteal Veins is not eaſily to be admitted, becauſe that muſt grow by Degrees, but it is plain theſe two Diſtempers often come ſuddenly, without any previous Indiſpoſitions, at leaſt any ſenſible ones.

I my ſelf had (not many Years ago) a very bad Lienteria, it laſted ſeveral Days, I eat my Meat as heartily as I uſed to do, purged violently, was ſtill empty, I took the common Things without Effect. I bethought my ſelf that I had all my Life, till I was above ſixty, done my ſelf Hurt with eating too much old Cheſhire Cheeſe, which bound my Body, and heated my Blood, and expoſed me to the Jaundice almoſt every Year. Since I left it off, I have never had one Fit of that Diſtemper, tho' near as much bound as I was before, and drinking Water pretty often keeps my Body cool, ſo that being coſtive does no Harm. Old Cheeſe is as ſtrong Meat for People that work hard as Beef, but

not

not fit for ſedentary People. I ſay, bethinking my ſelf, I toaſted a good large Piece of old Cheeſe, and with Bread eat a Meal of it. It ſtayed upon my Stomach, and taking it again, my Looſeneſs was gone, and I was very well. Now I think, Water drank cold is the beſt Drink in this Caſe, or if a little Cinnamon were boiled in it, it might do no Harm, and that this is better than burnt Wine with Cinnamon, for all ſharp Things, tho' given under the Name of Aſtringents, irritate the Bowels, and do not help Concoction near ſo much as Water. *Pitcairne* himſelf here commends the medicinal Waters, but I think common Water is every whit as good.

This by the Way. Then he ſpeaks of a Diarrhea, which, he ſays, proceeds either from Matter accumulated in the Bowels, or from the too much opening of the Hepatick and Pancreatick Ducts, and in that Caſe we ought to fear a Dyſentery, or Bloody-Flux, and he ſays, the Way to cure the one, and prevent the other, is to promote Sweating, or inſenſible Perſpiration, and Urine. Now when Water procures the eaſieſt Sweat, or at leaſt inſenſible Perſpiration, and is one of the ſafeſt Diureticks, it muſt be good for that Intention.

He

He ſays, we muſt obſerve whether a Fever come along with the Diarrhea, if ſo, they proceed from the ſame Cauſe, and then we muſt try firſt gentle, and then ſtronger Sudorificks.

Now, I ſay, Water is at once a gentle and a ſtrong Sudorifick, and moſt proper to be given in Fevers.

He ſays, the Diſtinction between pituitous, ſerous, bilious, and oleoſe Diarrheas is needleſs, for they all proceed from the ſame Cauſe, Want of Evacuation by Perſpiration, Urine, *&c.*

He ſays, the Diſeaſe that is leſſened by a Diarrhea, was cauſed by the Matter that comes away by it, and then that Diarrhea is critical, and not to be ſtopped, but only when it is ſymptomatical, *i. e.* when it either increaſes ſome Diſeaſe, or too much weakens the Patient.

He ſays, if the Cauſe lie in the Bowels, if the Matter be viſcid, it muſt be purged off, if not, it muſt only be well diluted with watery Things, or Liquids. I ſhould rather think, be the Matter of the Diſeaſe viſcid or not, if we dilute it well with Water, the Diarrhea it ſelf, before it ſtop, will purge it off ſufficiently, and my Opinion is, that Water will ſafely cure a Diarrhea, without any purging Medicines. I confeſs,

I have

I have no Notion of curing a Diarrhea or Looſeneſs by increaſing it.

He ſays, Phyſicians add Aſtringents to their Purges (ſure that is to bind and looſe both at once) He approves this in great, but not in gentle Diarrheas. I think, moſt of thoſe Things they call Aſtringents (which are generally either high Aromaticks, ſtrong Acids, dry Earths, or burnt Powders) irritate the Bowels, and therefore are not ſo proper to ſtop a Diarrhea or Looſeneſs. Or if there be any ſuch ſtrong Aſtringents as will ſo contract the Bowels as to ſtop it, they will do more Hurt than Good. So that the only effectual Way that I can think of, if the Fault lie within the Bowels, is by altering, lenifying, and quieting the Humours. And this, I think, Water will do better and ſafer than either the common Anodynes or Opiates. And if a Flux of Humours from the Blood cauſe the Looſeneſs, if it proceed too far, and it be found convenient to ſtop it, it muſt be done by turning the Courſe of the Humours from the Bowels, by Sudorificks or Diureticks, and if that can be done, the Diarrhea will ſtop of itſelf. Now I am ſatisfied Water will anſwer both theſe Intentions, with the

greateſt Efficacy, and the leaſt Danger.

Riverius, tells us, *Amatus Luſitanus* cured one in a bilious Diarrhea with drinking a great deal of cold Water.

And that he himſelf cured one in twenty-four Hours, with preſcribing a little Sal Prunellæ in his ordinary Drink, and with taking thrice a Day a Julep of Lettice and Purſlain-Water. And that if the Matter be ſharp and aduſt, it is to be tempered with cooling and moiſtening Things. And that the Leaves of Plantain boiled in Broth (Water is a much better Vehicle) are very good in that Diſtemper. And he hath ſeveral Compoſitions wherein he mixes the cooling Herbs. He ſays, that three Ounces each of the Juices of ſpotted Arſmart, and the greater Houſleek, boiled to the Conſumption of a third Part, certainly cures any Flux, tho' of never ſo long a Standing.

So that tho' he mentions a great many Aſtringent Medicines, yet we find very few of thoſe hot Spirits and high Aromaticks that are ſo common in the ordinary Practice, and particularly in a Book lately come out that pretends to contain the Standard Practice of *London*.

Regius

Regius makes his Preſcriptions up of cooling Herbs and Seeds.

Baglivi ſays, that ſimple Remedies are the beſt in theſe Diſtempers, and that he has known even a Dyſentery cured by Whey, both given to drink, and taken by Glyſters. I am apt to think Water would do the ſame Thing, with as good Effect, and leſs Diſturbance to the Body.

He adviſes not to give Aſtringents in the Beginning of the Diſeaſe, and from *Crato* not before the ſeventh Day. I confeſs, tho' we read of ſome great Cures done by them, and particularly by eating Medlars, *vid. River.* I can have no great Opinion of them till the Danger is over, and then they are needleſs.

The old Galeniſts, here, as in many other Diſtempers, run to their four Humours, ſome of which they ſay, together with the Corruption of the Aliments (as *Paulus Ægineta calls a Diarrhea*) is the Cauſe of this Diſtemper, they have their *Preparantia*, their *Purgantia*, and their *Corroborantia*, preparatory, purging, and ſtrengthning Phyſick. Now I have upon Occaſion ſaid before, that I look upon Water capable of ſupplying the Place of all their Preparantia, and if the Humours were

thoroughly cooled, diluted, and robbed of their Acrimony, as I do not know but they might be by Water plentifully given, the Diarrhea might go off without either Purgatives or Aſtringents, or both Purgatives and Aſtringents might be more ſafe and effectual.

The Chymiſts, after their uſual Manner, refer it to ſome dogged Salt, that by its Acrimony irritates the Fibres of the Bowels, Water is certainly good to take off that Irritation.

Vanhelmont lays the Fault upon the Stomach, and particularly upon the Pylorus or lower Orifice of the Stomach, and in the Lienteria, and Cœliack Paſſion, I do not know but the Fault may be in the Laxity of the Pylorus, and its Want of contracting it ſelf with Force enough to retain the Aliments. How far Water may affect this I know not, cold Water in ſome Degree, I believe contracts and ſtiffens the nervous Fibres, warm Water rather ſoftens and relaxes them.

Some others think Diarrheas proceed from ſharp Humours, falling from the Blood upon the Bowels, and irritating them to ſuch Convulſions as diſſolve the Feces, and bring a Looſeneſs, and Dr. *Pitcairne* thinks, this comes from the Want of other natural Evacuations

by

by Perſpiration or Urine, and it is natural to cure one Evacuaton by promoting another, and in this Caſe Sudorificks or Diureticks muſt be good. Now being Water is the moſt gentle eaſy Sudorifick and Diuretick, it muſt be good by turning the Humours back into the Blood, and ſending them out by the Way they ought to have gone before, and we find by Experience, the more we ſweat, and the more Water we make, the leſs Stools we have.

Sylvius aſcribes Diarrheas to two Cauſes.

1. To the Effervescence of the Humours in the Bowels when the Bile is too ſaline and ſharp. Now I am ſatisfied that Water will correct the Bile, by cooling its Heat, diſſolving its Salts, and taking off its Acrimony.

2. He aſcribes Diarrheas ſometimes to the Obſtructions (eſpecially in the Lienteria and Cœliack Paſſion) of the Lacteal Veins, when there is a Cruſt of viſcid Matter that covers the Mouths of thoſe Veins, and hinders the Paſſage of the Chyle, and this may poſſibly be ſometimes when the Stomach is not to blame. Now Purges (if this Matter be very tough and viſcid) will not take it off, but leave it behind them, unleſs it be well diluted and ſoftened, by ſome

ſuch innocent Liquid as Water. And Water being the fineſt Liquid we have, will by the Smallneſs of its Parts more eaſily inſinuate it ſelf into thoſe ſmall Canals, than perhaps any other Liquid whatever, and ſo do Service by cooling, opening, and cleanſing them.

Willis makes ſharp Humours, bilious or ſerous, flowing from the Blood upon the Stomach and Bowels, the Cauſe of a Diarrhea or Looſeneſs. And then Sudorificks muſt be good, to turn back that Matter into its proper Channel, tho' he preſcribes Purges, and Theriacha Andromachi, and Opiates, without mentioning either Sudorificks or Diureticks, the eaſieſt and ſafeſt of which is common Water.

Doleus in a Manner comes in with all the Accounts before given, but ſeems to inſiſt moſt upon the Irritation of ſharp acid Humours cauſing Convulſions in the Bowels, and that they bring the Looſeneſs. Now I have proved that Water is good to take off Convulſions.

Sennertus. He firſt treats of that Diarrhea when the Chyle cannot paſs into the Lacteal Veins, and preſcribes cooling and opening Herbs, *&c.* and cautions againſt hot Things for Fear of the Liver. But ſince it is known the

Chyle

Chyle does not go directly to the Liver, but another Way to the Heart before it comes to the Liver, there is no Need of that Caution.

Of a Fever, *with a* Looſeneſs.

THIS, I believe, all Phyſicians will acknowledge, if the Looſeneſs cannot be ſtopped, muſt in the End prove mortal. 'Tis true, ſometimes a critical Diarrhea may prevent a Fever, and ſometimes, if it be not too violent, nor continue too long, it may, eſpecially in Children, take off a Fever. And there ſeems no other Way to judge whether in this Caſe a Diarrhea be critical or ſymptomatical, but by its Continuance, and the good or bad Effects it has, by its weakening the Patient or not, and therefore the Diarrhea is not to be ſtopped too ſoon, till we be able to judge whether it be critical or ſymptomatical.

Now, I believe the drinking of Water, in Caſe of a Fever with a Looſeneſs, is good. I knew an old Man, ſince *Febrifugum Magnum* came out, that had

had a Fever with a Diarrhea, or Looſeneſs, for ſeven Weeks together. He had a very eminent Phyſician. In the end, he was brought ſo low, that his Phyſician ſaid he could not recover. A Friend of his that he had a great Value for, ſent to intreat him to drink a little cold Water. He drank one ſmall Glaſs, and finding that it did him no Harm, but, as he thought, ſome Good, in a little Time he called for another, and continuing that Courſe, in a little Time his Looſeneſs ſtopped, and his Fever went off by Degrees, he recovered his Strength, and was well again.

Of a Colliquative Diarrhea, *or* Looſeneſs.

THIS is when not only the noxious Humours are carried off, but even the ſolid Parts are waſted, and the nutrimental Particles come away by the Bowels. Theſe Colliquations, or melting away of the ſolid Parts, and the Nouriſhment of the Body, ſometimes happen by Sweat, as in bad Hecticks, and

and Conſumptions, ſometimes by Urine, as in the Diabetes, and ſometimes by a Flux or Diarrhea, as in this Caſe.

Now, he ſays, this is to be cured by cooling and moiſtening Things, and by very mild and gentle Aſtringents. He ſays, *Hippocrates* uſed two Things, a certain Ptiſan, and cold Water. And *Galen* ſays, the Uſe of cold Water is ſo neceſſary, that without it, the Patient will fall into a *Maraſmus*, or Waſte of the whole Body. But if People be afraid of Water, they may take Barley, Endive, Purſlain, Borrage, Water Lilly Waters, he mentions Sorrel, Blackberry, Pomgranates, Citrons, Quinces, being moderate Aſtringents, but of thoſe quere, and Whey, which certainly cannot be good, unleſs as a Purgative, in this Caſe, becauſe it will increaſe the Looſeneſs.

N. B. Theſe Waters diſtilled from Herbs (except ſome few Aromaticks) are now much out of Uſe, and not many of them kept in the Shops, and with very good Reaſon, becauſe theſe ſimple Waters of cooling Herbs will not keep without growing muſty, nor indeed the ſimple Waters from Aromaticks very well, the Year round, and therefore it is my Opinion, and has been this forty Years, that the beſt Way of taking

theſe Herbs, is in Summer, when they can be had in Perfection, by pounding and ſtraining them into ſome convenient Vehicle, either Water, Ale, or Wine, and ſo drinking the Juice either crude, if they be not too nauſeous for nice People, or thoſe who are much weakened by Sickneſs, or clarifying them a little. And in Winter when they cannot be had, by making Tea of the Herbs carefully dried, and well kept, whereby we have the true Spirit of the Simple, and the volatile Salt of the hot and aromatick Herbs in ſome good Perfection. And my Opinion is, as to the ſimple Waters of cooling Herbs, cold Water may ſupply the Place of all or moſt of them.

If the Diarrhea proceed from Abundance of Phlegm or Serum, in the Blood, and Lymphatick Veſſels, and do not ſoon ſtop of it ſelf (for it is, I think a general Rule, that no Diarrhea is to be ſtopped too ſoon, till we can gueſs by the Continuance of it, and by the Influence it has on the Patient's Strength, whether it be critical or Symptomatical) in this Caſe, I ſhould think, the ſafeſt Way of curing it, is by ſudorificks, or Diureticks, or both. Now Water will anſwer both thoſe Intentions as well or better than moſt other Things.

If

If the Diarrhea proceed from the Stomach, either from its being clogged with vitious Matter, or from a Surfeit of any ill Diet, as Melons, Cucumbers, &c. as ſuch a Diarrhea may take off the Diſeaſe, ſo if it be too violent, or continue too long, there is nothing better than Water to clear the Stomach, quiet the Humours, &c. and therefore it is very good in Surfeits, and even in that violent and dangerous Diſeaſe called Cholera Morbus.

If the Diarrhea proceed from Worms, there is nothing better than Water to be given to prevent ill Conſequences, till they can be killed and carried off by proper Methods. And we find that after Rain, a great Number of Worms come out of the Ground at or before Night, and after a great Puſh of Wet many lie dead upon the Ground. The Reaſon ſeems to be that they cannot bear ſo much Moiſture.

If the Diarrhea proceed from the Liver, or which is all one, if it be a bilious Diarrhea, it is certain that Water is good to cool and take off the Sharpneſs, and leſſen the Quantity of the Bile, and promote its regular Flux upon the Bowels, and to open thoſe Obſtructions in the Liver, that have hindered its regular Secretions, and turned it back upon

the Blood, the ſudden Flux of this Bile may ſometimes cauſe a Diarrhea. And I am certain from Experience, that to drink a deal of Water, without any Thing elſe, will cure any ordinary Jaundice, that is not gone too far, or by too long Neglect, fixed in the Habit of the Blood.

If the Diarrhea proceed from the Spleen, *i. e.* the Bilis Atra, and the melancholy Humour in Abundance, as Water is certainly good to open the Obſtructions of the Hypochondria, and to leſſen that Humour, ſo, if when abounding much in the Hypochondria, it fall upon the Bowels, Water is good to correct the Virulence and Malignity of it, and thereby to ſtop the Diarrhea. This Bile is ſaid by the Galeniſts, to be one of the four Humours. But it ſeems to me very probable, that there is no ſuch natural Humour in an healthful Body, but that it is only the Corruption of the Blood and other Humours, by long Stagnation, and for Want of a due Circulation in the Hypochondria.

If the Diarrhea come from the Womb in Women, it generally is occaſioned by the Want of the Menſes, and comes about the Time when thoſe ſhould be, and may ſometimes prevent the ill Conſequences of the Want of that Evacuation,

tion. And therefore, as other Diarrheas is not to be ſtopped too ſoon, before we can ſee whether it be for Good or Hurt.

However, being I am ſure that Water is a good and powerful Aperient in many other Caſes, I cannot ſee why it may not be ſo in Obſtructions of the Womb, from whence the Want of the Menſes proceeds, and conſequently may take away the Cauſe of ſuch Diarrheas. And I have heard of ſome much troubled with that Diſtemper, after taking a great deal of Phyſick, drinking Water often, have been tolerably well freed from it.

If the Diarrhea proceed from a Catarrhe, or Abundance of ſerous or pituitous Matter, falling from the Head upon the Bowels, it is much the ſame Caſe with the ſerous Diarrhea, and to be treated with Sudorificks and Diureticks, and Water is very good for both Intentions.

N. B. It is now the Opinion of moſt, that the Flux of ſerous or pituitous Humour, that conſtitute a Catarrhe, never comes from the Brain, but is diſcharged upon the ſalival Glands, or others from the Lymphatick Veſſels.

When

When Children breed their Teeth they have often a Fever, and ſometimes a Diarrhea. When Parents perceive this, if they would give the Child Water often, 'tis not unlikely it might cure the Fever, and ſtop the Diarrhea, (perhaps it might not be ſafe to ſtop the Diarrhea without ſomething that may help to take off the Fever.) If they would do this, they might likely ſave the Lives of a great many Children that dye of Breeding their Teeth.

If the Diarrhea proceed from too violent Purging, I believe it would be very good to give Water with a Toaſt in it, made pretty warm (tho' not too hot) not in ſuch a Quantity at once as to provoke Vomiting, but often to drink ſmall Draughts of it. This, I believe, would do as well to refreſh and heal the ſore, and it may be excoriated Bowels, as ſome other Things that are uſed in that Caſe.

In all theſe Caſes, *Sennertus* runs much upon cooling, or very moderate aſtringent Herbs, and other Things, together with gentle Purges, we hear little of ſtrong Aſtringents, high Aromaticks, or hot Spirits, or violent Purgatives.

As to the Lientery, and Cœliack Paſſion, the firſt is, when the Aliments paſs thro'

thro' the Stomach without any Concoction at all, the ſecond, when they do not ſtay long enough for a full Concoction. Moſt Phyſicians think they differ only in Degree, and both *Doleus* and *Pitcairne* treat of them under the Head of Diarrheas, as not much differing from it. I dare not ſay Water is good for the Cure of theſe, tho' I think it innocent, and if it be drank cold, has ſome Degree of Aſtringency in it. And it ſeems that Aſtringents muſt be very proper in that Diſtemper, for it ſeems to me very likely that the Diſeaſe lies not in any phlegmatick or cholerick Humours that hinder Concoction, but in the Tone of the Nerves of the Stomach, and particularly of the Pylorus, whereby the lower Orifice of the Stomach cannot contract it ſelf as it ought, and uſually does, to keep the Aliments long enough for Concoction. I have ſaid before, that I had ſome Years ago a Lienteria. I felt no Indiſpoſition at all in my Stomach, eat my Meals as uſual, but nothing ſtayed upon my Stomach, and I had a violent Looſeneſs for ſeveral Days, and after having tryed ſeveral common Things without Effect, I cured my ſelf with eating a good Quantity of old Cheſhire Cheeſe toaſted, and Bread with it. That ſtayed upon

my

my Stomach, and taking it twice, my Looſeneſs ſtopped, and I was very well. Every one knows old Cheeſe is very heating and aſtringent, and ſeems proper to alter the lax Tone of the Nerves, and I know by long Experience, it will lye as long upon the Stomach, without corrupting, as any Meat whatever that is innocent. It is the Opinion of many Phyſicians, that we ought to drink very little in that Diſtemper, I ſhould rather think we ought not to drink at all for ſome Time, but to content our ſelves with drying and heating Solids. Whether if we drink any Thing it ſhould not be very aſtringent Liquors, and rather ſtrong than ſmall, and in a very ſmall Quantity, or whether a gentle Vomit might not be proper, not ſo much to clear off any Humour from the Stomach, as to force it to contract it ſelf upwards, and thereby bring it to its uſual Tone. Theſe Things, I ſay, I muſt leave to better Judgments.

If the Fault lay only in the Want of Concoction, thro' the clogging of any Humours that commonly diſturb the Stomach in its Operations, the Meat would rather come upwards than downwards, or would rather ſtay too long upon the Stomach than go off too ſoon,

and

and if that were the Caſe, nothing would be better to take off the Indiſpoſition than Water. Thus, I think, I have bid fair to prove that common Water is one of the beſt Cures for a Diarrhea, and to take a good Quantity of it in Bed, muſt be the beſt Way to do it. I believe the moſt general Cauſe of Diarrheas is the Indiſpoſition of the Blood, and a Flux of ſharp Humours from the Blood upon the Bowels, and Water in a Quantity would probably turn the Courſe of theſe Humours, and by Sweat, or Urine, or both, clear the Blood, and eaſe the Bowels, and the Diarrhea would ceaſe of it ſelf.

After all, I am not inſenſible, that hot Spirits and high Aromaticks may ſometimes be good and neceſſary to ſtop a Diarrhea when it continues too long, and grows dangerous, and when we are ſure it is not critical, but ſymptomatical, and for this, Brandy burnt, with or without Nutmeg or Cinnamon, is thought to be a very powerful Medicine, but this muſt be chiefly when the Fault lies only in the Stomach and Bowels, and there is no Fever comes with it. For as all Phyſicians agree that it is not ſafe to ſtop a Diarrhea too ſoon till we can judge whether it be a Remedy or a Diſeaſe, ſo the giving ſuch

hot and ſtrong Things, may, if there be a Fever, increaſe it, or by ſtopping the Looſeneſs too ſoon, and heating and rarifying the Blood, bring a Fever when there was none, when perhaps Nature, by bringing the Diarrhea, deſigned to prevent a Fever. And therefore, I am fully of Opinion, that the very beſt Way of treating a Diarrhea in the Beginning is by cooling Things, particularly Water, which will take off the Acrimony of the Humours, calm the Bowels, and prevent the Fever, and if the Diarrhea be cauſed by ſharp Humours from the Blood, probably cure it, by turning the Courſe of the Humours, and carrying them off by Urine or Perſpiration.

I know likewiſe it is the Opinion of moſt Phyſicians, that a gentle Vomit, particularly of Ipechachuanna, is very good (eſpecially where the Fault lies in the Stomach, which I believe it does not always do.) And this I conceive may be good, both by carrying ſome hurtful Humours off the Stomach, and by turning the periſtaltick Motion, and inclining it upwards, when in Diarrheas it works with too much Violence the other Way. But I much queſtion whether this Method be proper in all Diarrheas.

And

And whereas a violent and laſting Diarrhea ſometimes ends in a Dyſentery, I doubt not Water would prevent that, by qualifying the Acrimony of the Humours, and ſo preventing the excoriating of the Bowels, and the opening of the Blood Veſſels into them, which generally are the immediate (or, as the Term is) the continent Cauſes of a Dyſentery.

Of a DYSENTERY.

THIS is when the Patient has Stools only mucous, or with a Mucus mixed with Blood, or when it is very bad, only bloody, with great Pains, by which it is diſtinguiſhed from the Fluxus Hepaticus, which is, when a ſerous Blood, like Water wherein raw Fleſh has been waſhed, comes away without Pains.

The beſt Phyſicians own, that the Cure of this is much the ſame with that of a Diarrhea.

Dr. *Shaw* orders, in his late *Standard Practice of London*, to bleed univerſally, eſpecially if the Dyſentery proceed from a Plethora, or the Stoppage

of any Evacuation *(as I believe it often does)* next give an Emetick of Ipecacuanha, and after that a lenient Purge of Rhubarb.

So far as Blooding is neceſſary in a Fever, it cannot be improper in a Dyſentery, for all Dyſenteries either come from a Fever, or if they proceed from any Cauſe within the Bowels (as poſſibly they may) if they laſt long they will bring a Fever, tho' I am apt to think Dyſenteries as well as Fevers, may be taken off without any Blooding at all.

What a Vomit of Ipecacuanha, or any Vomit at all can ſignify, but to diſturb the Patient I cannot imagine, when moſtly the Stomach is very little affected.

And I queſtion whether any Purging at all be proper in a Dyſentery, and I as much queſtion whether Rhubarb can be reckoned among the lenient Purges. 'Tis indeed none of the ſtrong dogged Purges, and a very good one, and I confeſs generally approved of by Phyſicians, and particularly in this Diſtemper, and I find none rejects it but *Septalius*. And I ſuppoſe the Reaſon is, becauſe it is obſerved to leave a binding Quality after its Operation, which may be good in this Diſtemper, which

is

is joined with an immoderate Flux, but it is far from being one of the lenient Purges.

Notwithſtanding the Phyſicians are generally for Purging in this Diſtemper, and ſome for doing it often, even every other Day, I am not ſatisfied that it is at all proper.

Sometimes a Diarrhea, if violent, ends in a Dyſentery.

Sometimes a Dyſentery proceeds from an Hypercatharſis, or the giving of too ſtrong a Purge. Now if a violent Diarrhea, or a ſtrong Purge often bring a Dyſentery, what Work will Purging make when the Dyſentery is already violent, the Mucus of the Bowels looſed, and the Blood Veſſels opened? It will certainly encreaſe and make it worſe.

And tho' the Pretence be to carry off the morbifick Matter, there will ſoon come more morbifick Matter from the Blood, and if they carry it off till there wants Matter, they may carry off the Patient too.

Another Sort of Medicines uſed in this Diſtemper are Aſtringents, of which there are ſome Hundreds. And here the Phyſicians are more cautious than they are of Purges.

The

The Standard Practice of London tells us, that if it be unſeaſonably ſtopped, it may occaſion a Mania, Apoplexy, Pleuriſy, Spitting of Blood, or a Dropſy.

Etmuller ſays, the Apthtæ, or a Teneſmus may follow.

Crato (with whom agrees *Baglivi*) would not have Aſtringents uſed till the ſeventh Day, and then perhaps it may be too late to give them. In ſhort, I much queſtion whether there be any Aſtringents that will effectually ſtop this Diſtemper, or if there be, and they be given, and happen to ſtop it, I ſtill queſtion whether they do not often do more Hurt than Good. And therefore *Etmuller* obſerves, that they that commonly attempt the Cure with Purges, Glyſters, and Cleanſers or Detergents look only to the morbid Effects, and not to the Root of the Diſeaſe.

Another Sort of Things that are preſcribed in this Diſtemper are Balſams and Vulneraries. Theſe are preſcribed upon the old Galenical Hypotheſis, that there is always an Ulcer or ſome ſuch like Thing that is the Cauſe of this Diſtemper. But later Phyſicians tell us, and particularly *Etmuller*, that this is

ſeldom,

ſeldom, if ever the Caſe; for if it were ſo, it would be impoſſible that Dyſenteries ſhould be ſo ſoon cured, as ſometimes they are, by proper Remedies.

And indeed, I believe, an Ulcer or Gangrene much oftner proceeds from a bad Dyſentery than the contrary, but if there be any ſuch Thing, and Vulneraries be thought good, I ſhould think it more proper to boil the beſt Vulneraries in Water, and particularly the cooling ones, or to make Tea of them, and take them in a good Quantity, than to take any Balſam, ſimple or compound however diſſolved. If they take a ſmall Quantity, they will hardly reach the Place of this Diſtemper, or if they do, it will be mixed with ſo many bad Humours that they will have little Effect. (Tho' Turpentine is obſerved to operate particularly upon the Reins and Bladder.) And if the Balſams or balſamick Gums are given in a large Quantity, they will I fear do the Stomach more Harm than they will do the Bowels Good. So that I muſt caution, that they muſt be the cooling Vulneraries, that muſt be uſed, ſuch as Plantain, *&c.* for the hot muſt needs irritate and heat the Bowels, and increaſe the Diſeaſe.

The

The laſt Thing that I ſhall ſpeak of is Sudorificks. Which *Riverius*, *Etmuller*, and *Sennertus* ſay are ſo neceſſary, that they are to be uſed at the very firſt, even before Purgatives, eſpecially when there is a Fever, and above all in a malignant Fever, and when the Dyſentery is epidemical, and that this in ſuch Caſes is the only ſure Way to cure the Dyſentery. And *Sennertus* cites *Gulielmus Fabricius*, telling us of a certain Princeſs, who by eating Muſhromes, fell into ſo violent a Dyſentery, that ſhe ſeemed to be in the Agonies of Death, but by the Uſe of ſome Sudorificks, falling into a ſound Sleep, and a violent Sweat, in a few Days was very well. And he tells us, that all thoſe Things that are proper in malignant Fevers, are good in this Caſe.

Now, when I am ſo ſure, that a good Quantity of common Water taken in Bed, will give as plentiful, and a much more ſafe and eaſy Sweat than any of the hot Sudorificks, and this will take off moſt Fevers, whether common or malignant, in a little Time, I have no Reaſon to doubt, but if this Method were taken when the Dyſentery firſt appears, it would take off the Fever and the Dyſentery too, by turning the

Flux

Flux back into the Blood, and ſending it out by the Glands of the Skin in a plentiful Sweat. And this is the more likely, when ſome great Phyſicians, and particularly *Pitcairne*, think, that moſtly theſe Diarrheas, whether bloody or not, come from the Want of ſome Evacuation, either that of Perſpiration, Urine, or the menſtrual Purgations, *&c.* And if the Cauſe lie in the Bowels, by any Exceſs either in the Quantity or Quality of Things taken in, as in the Caſe of the Princeſs mentioned by *Fabricius*, this would be a better Way, than either that of Purgatives or Aſtringents; for Water would effectually cool the Bowels, quiet thoſe Convulſions that forward the Diarrhea, quiet the Humours, and take off their Acrimony, ſo that whether the firſt Cauſe lie in the Blood, or in the Humours of the Inteſtines, this will in my Opinion be the ſhorteſt, the ſafeſt, and the ſureſt Method to take off this Diſtemper, as well as, I think, I have proved it to be for a common Diarrhea. I have known a Doſe of Water throw the Humour that cauſed the Cholick out into a Raſh, and the Perſon was well, and free from the Cholick a good while after. And that a violent Cholera Morbus has been cured by a few

Glaſſes of Water, when the Patient's Life was deſpaired of. Both which together prove that Water is very good, both to ſend any Humour out of the Blood, by reſtoring Perſpiration, and to quiet the moſt violent Humours in the Bowels, as in the Caſe of the Cholera Morbus. I will only add one Thing, that as Opiates are generally preſcribed and commended in theſe painful Diſtempers, but always with broad Hints that they are to be uſed with great Caution, and that they often do a great deal of Hurt, as they may ſometimes do a great deal of Good, Water would anſwer all the Intentions for which they are given, by quieting the Humours, taking off Convulſions, eaſing Pain, and giving Sleep, and that without any Danger at all.

I have read ſomewhere, that either *Amatus* or *Zacutus Luſitanus* tells us of a young Man that had a very bad Dyſentery, and without the Advice of any Phyſician, by drinking Water was cured.

Of

Of the Fluxus Hepaticus.

IF Water, uſed as I have directed, will cure the Dyſentery, as I believe it will, it will *a fortiori* cure the Fluxus Hepaticus, which ſeems to me to be a much more moderate Flux of a great deal of Serum tinctured with a little Blood.

This is reckoned a bad Sign in the End of a Fever, or a Conſumption, and probably comes from the long ſtopping of the Pores of the Skin, after ſome acute Diſtemper. 'Tis well known that there is ſometimes in Conſumptions an immoderate Flux of Serum, by the Glands of the Skin, in colliquative Sweats. And this Fluxus Hepaticus ſeems to be nothing but a Colliquation of the Serum upon the Bowels, by a Stopping of the Pores of the Skin, or it may be in Part by the Stop put to a ſufficient Quantity of Serum paſſing by Urine. This Abundance of Serum, may, by the ſtopping of the Pores of the Skin, ſometimes turn to a Diabetes, which, I believe, is always attended with ſomething of a Fever, which to me appears plain

by the great Drought that always goes along with a Diabetes.

This therefore is nothing but a ferous Catarrhe upon the Bowels, with ſome Degrees of Colliquation in the Blood.

I have before ſaid, there is as much Need of Water in ſerous (or, as they are called) cold Diſtempers, as in more acute ones.

I have aſſerted that Water will cure Catarrhs, which are nothing but Abundance of Serum diſcharged from the Lymphatick Arteries, upon the ſalival, bronchial, and pulmonick Glands. That it will cure the Chin-cough, which is nothing but a Catarrhe in Children, from Abundance of Serum falling upon the Lungs, which brings violent Coughing. And both theſe are always more or leſs attended with a lurking lingering Fever, that laſts a long Time, and does not come to a Criſis as other more acute Fevers do. Now, if there be any thing in this Notion, as I am apt to think there is, I cannot ſee but Water may cure this ſerous Catarrhe upon the Bowels, as well at it does the others. And this ſeems more probable, in that in the Fluxus Hepaticus, there is no Pain, no more than there is in other Catarrhs, and therefore in this

this it is diſtinguiſhed from a Dyſentery. Only the Lungs being a more tender and ſenſible Part, the Flux of Serum upon them gives great Diſturbance to them, by hindering the free expanding and ſubſiding of the Veſiculæ, and thereby provokes to continual Coughing, and indangers the Breaking of thoſe tender Veſſels, or if the Serum be in great Abundance, and either very thin and ſharp, or very viſcid, it becomes that which Phyſicians call a Catarrhus Suffocativus, a ſuffocating Catarrhe, and takes them off at once. And as Air is ſo neceſſary to Life, that we cannot ceaſe to breathe a few Minutes without Danger of Death, the very Air we breathe in muſt have a conſiderable Influence upon thoſe Catarrhs that fall upon the Lungs.

I might add one Thing. *Baglivi* ſays, he has cured a Dyſentery (and why not a Fluxus Hepaticus) with only Drinking, and giving Glyſters of Whey. And I fancy Water would do the ſame Thing, ſooner and better.

This brings to my Mind a Thought I have ſometimes had, that a Glyſter of cold Water would do no Hurt in a Dyſentery, and that it would be a good Thing in the Piles, and the Teneſmus.

But

But of that I may perhaps ſay more another Time.

Of the Teneſmus.

THIS is when we have almoſt a continual Motion to go to Stool, without voiding any Matter, only perhaps a little Mucus tinged with Blood.

In this Diſtemper, only the Rectum or loweſt Gut is affected, and it often follows, and ſometimes goes along with a Dyſentery.

The Phyſicians ſay the Cure of this is much the ſame with that of a Dyſentery. Some Phyſicians ſeem to ſuppoſe this Diſeaſe comes from an Ulcer, but tho' it may produce an Ulcer, it ſeldom comes from it.

As in the Dyſentery, ſo here, I think, neither Purges, not Aſtringents, nor Detergents, nor ſharp Glyſters are good, but cooling and lenifying Things.

And being this Indiſpoſition is only in the Rectum or loweſt Gut, if we could find out any proper Glyſter, that would not irritate the Part, and yet take off the Acrimony of the irrita-

ting

ting Humour, and gently heal the Part affected, it would be uſeful.

Baglivi ſays, he has known a Dyſentery cured by Whey Glyſters, and why may it not be as good or better in this Caſe, becauſe we are ſure the Glyſter will reach the Place where this Diſtemper lies, but we are not ſo ſure it will reach the Place where the Dyſentery is.

I have a ſtrong Fancy, that a Glyſter of common cold Water would be better than that of Whey, it has not only a cooling but healing Quality. I have ſaid before, that I have good Information of ſome Inſtances, where cold Water has cured ſome ſtubborn Ulcers, where the Surgeon's Art has failed him. And therefore if there ſhould be an Ulcer in the Teneſmus, there would be no Danger. If a little of the Juice of Plaintain, Houſleek, Figwort, *&c.* were put in the Water, or the Herbs infuſed, and the Water let go cold again, it might do well. I muſt think that convenient Glyſters muſt be the moſt proper and certain Cure for the Teneſmus, drinking in the mean time pretty often a Glaſs of Water, to keep the Blood cool, and to correct the Acrimony of the Humours.

Of

Of the Hemorrhoids.

THE Hemorrhoids or Piles are of two Sorts, the *Fluentes*, when the Veſſels are opened, and the Blood flows, and theſe, if they are not too violent or continue too long, may be very healthful, or the Stopping of them, if they be periodical, may bring many bad Diſtempers.

I knew a Gentleman that had a periodical Flux of the Hemorrhoids (how often I do not remember) one of the healthieſt Men that ever I knew, he lived to be above ninety Years of Age.

Some think this is much the ſame with the Fluxus Hepaticus. And I do not ſee any better Account to be given of the Fluxus Hepaticus than this, and in this Flux of the Hemorrhoids, there is but little Pain, no more than in the Fluxus Hepaticus.

And I do not ſee, but if Water ſhould happen to be good in the Fluxus Hepaticus, it may be good in this, when

it

it is in Excefs, and decays the Strength of the Patient.

I cannot believe that Purges can be good in this Flux of the Hemorrhoids, no, not Rhubarb it ſelf, as much as it is cried up in all the Fluxes of Blood, for theſe will certainly draw the Blood and Humours down towards the Bowels, and increaſe the Flux. Some gentle Relaxers may do ſome Good, or no Harm. Of theſe Tamarinds, and common Prunes, ſtewed with a good Quantity of Sugar (which are every Whit as good) I believe are the very beſt. *Riverius*, *Sennertus*, and *Doleus*, *&c.* recommend them from Experience in theſe Fluxes of Blood. They are very cooling, moderately relaxing, yet with ſome Degree of Aſtringency.

I can have no great Opinion of ſtrong Aſtringents, ſuch as are preſcribed by ſome modern Phyſicians, and particularly by the late Book called, *A new Practice of Phyſick*. If they have ſuch a Stiptick Aſtringency as is attributed to them, they may ſtop the Blood too ſoon, and bring Inconvenience by it.

Balſams, and balſamick Gums ſignify nothing, if taken inwardly, they can be given but in a ſmall Quantity, elſe they will do more Hurt in the Sto-

mach, than Good in the lower Bowels, and will be loſt in their Paſſage.

In ſhort, I cannot ſee, but Water taken in a good Quantity, and eſpecially in Bed, may be more likely to do the Work, than any of theſe. It is very probable, I think, that an Exceſs in one Evacuation generally proceeds from the Defect of ſome other, in this Caſe either that of Perſpiration or Urine. And as I am very ſure that Water will give a kindly Sweat, and is a very good and gentle Diuretick, it may likely turn the Evacuation another Way, and ſo ſtop the Flux of the Hemorrhoids.

And this perhaps it may do the ſafeſt Way that it can be done, by correcting and ſweetning the Acids, and carrying off the Exceſs of Serum from the Blood, which moſt Phyſicians aſſign as the Cauſe of this Flux of the Hemorhoids.

The Galeniſts generally aſcribe this Flux to a Plethora or Fulneſs of Blood. And as Blooding may be good in that Caſe, ſo I am bold to aſſert, that a Plethora does not always proceed from the Quantity, but much oftner from the Quality, or preter-natural Indiſpoſition of the Blood. As ſome Liquors,

Milk,

Milk, Gruels, &c. tho' the Veſſel be not half full, by extream Heat will boil over, and take up double the Space they did before, ſo it is with the Blood in a Man's Body. Now I am ſure, that in Fevers, Water, without Blooding, will by Degrees leſſen the Plethora, more than Blooding will do without Water, and ſo may be good in this Caſe.

The *Paracelſians* talk of ſome *Salia ſylveſtria acria*, certain acid Salts in the Serum, that make the Blood too thin and ſharp. Now Water enough, will diſſolve any Salts whatever, that conſiſt with Life, and be in the Blood.

Vanhelmont tells us, that in this Flux the Pylorus and the Gall are fallen out, I believe neither he nor I know how they fell out, nor how to agree them.

Sylvius ſays, this Flux generally proceeds from too much Serum, and that from too much Drinking. If ſo, I think a Sweat, if they can procure one with Water, is the beſt Way to carry off that Serum, tho', I believe, ſome very ſober abſtemious People, may ſometimes be troubled with this Diſtemper.

Willis aſcribes it to too much Heat and Acrimony of the Blood, that opens

the Blood Veſſels in thoſe Parts, and I am ſure Water is very good to cool the Heat and correct the Acrimony of the Blood and Serum.

Moſt of the Phyſicians, *Doleus*, &c. very much agree with *Willis* in this his Opinion.

Dr. *Shaw*, in his new Practice of Phyſick, aſſigns three Cauſes, either a Plethora, a Suppreſſion of ſome neceſſary Evacuation, or too great a Seroſity and Sharpneſs in the Blood it ſelf.

Now of all theſe I have ſpoke already, and have taken the Boldneſs to aſſert, that Water is good for all or any one of them.

Etmuller obſerves, that if we ſtop this Flux only by ſtrong Aſtringents, without correcting the internal Ferment of the Blood, ſpitting of Blood, and other Miſchiefs may follow upon it. Now, I think, Water will cure this Ferment of the Blood, by cooling its Heat, which moſtly cauſes the Plethora, by correcting its Acidity and Sharpneſs, and by carrying off the too great Abundance of Serum, by Sweat, Perſpiration, or Urine, and conſequently will ſtrike at the Root of the Diſtemper, and will ſtop the Flux, and prevent its returning, without any Miſchief or Inconveni-

convenience. If either Balſams, balſamick Gums, or Stipticks and Aſtringents are thought good, to be ſure they will be much more effectual in this Caſe given in Glyſters, tho' I am apt to think, no ſtrong Glyſters can be good in this Caſe.

I ſhould rather chuſe an Infuſion of ſome of the common cooling Herbs, Plantain, Lettice, Purſlain, Houſleek, *&c.* in common Water, and given either cold, or very little warmed, by Way of Glyſter, as proper in this Diſtemper.

The *Hemorrhoides cecæ*, or blind Hemorrhoids, or Piles, are when the Veſſels of the *Inteſtinum Rectum* are only ſwelled, diſtended, and cauſe Pain, but no Blood flows.

One Way of curing theſe, is by giving Things to break the Veſſels, and forcing the Blood to flow.

This will certainly give eaſe as to the Pain, but if the Hemorrhoids can be cured without it, it muſt be more convenient, unleſs the Patient be under ſome ſuch Diſtemper as ſeems abſolutely to require a Flux of Blood, ſuch as a Mania Madneſs, great Obſtructions in the Hypochondria, *&c.* For if this Way of Cure be often taken, Nature will learn to work that Way,

and

and it may bring on a periodical Flux of the Hemorrhoids, which, as ſometimes it may do good, ſo at others it may do a great deal of Harm, if the Flux be too violent, and of too long Duration. And I ſhould think, the blind Hemorrhoids, when no Blood flows, would be more eaſily cured than the other, eſpecially if the Flux of Blood is violent and plentiful, but that I muſt leave to better Judgments. However, to be ſure, a periodical Flux of the Hemorrhoids is no natural Way of Evacuation, will be very troubleſome, as well as it may be ſometimes dangerous. *Riverius* and *Sennertus* are both of Opinion, that it is generally better to cure theſe Hemorrhoids without forcing a Flux of Blood than with it.

Theſe Hemorrhoids are either external, when the Swelling appears at the Anus, or internal, when it is higher up in the Rectum or ſtraight Gut, there may be ſome Difference in the Cure of theſe two.

But I ſhall firſt ſpeak of what is common to both.

He that would ſtrike at the Root of this Diſtemper, muſt firſt apply to the Blood. Probably the Hemorrhoids, generally, ſo far as they depend upon the Blood, muſt proceed either from a

Plethora,

Plethora, or Fulneſs of Blood, or from the great Acrimony, Sharpneſs, and Heat of the Blood and Serum, both which may be the Conſequents of the ſtopping of ſome other natural Evacuation, either that of Perſpiration or Urine. In a great Plethora of Blood, whether it proceed from too great a Quantity, or the ill Quality of the Blood, blooding in the Arm may do good, partly, by cooling its Heat, and partly, by deriving a greater Quantity in Proportion, of the circulating Blood, into the aſcending Trunk of the Aorta, and conſequently leſſening the Quantity of that which flows into the deſcending Trunk of the great Artery, which will be ſome Revulſion from the Parts affected. Tho' I am apt to think the Hemorrhoids may be cured, as well as a Fever, by Water, without Blooding at all, that is, by drinking a deal of Water, which will more effectually take off the Acrimony and Heat of the Blood, than moſt other Things, and that, I think, for this very good Reaſon, becauſe it may be given in a much greater Quantity than any Alcalies can be, and will mix with the whole Maſs of Blood, and alter its Temper, both as to its Heat and Acrimony.

I fancy

I fancy, no Purging Phyſick can be good in this Caſe, for that will draw down the Humours towards the Part affected, and certainly increaſe the Pain. Tho' ſome gentle Coolers and Relaxers may be good, Tamarinds, Prunes, Caſſia, and Oils. If the Body be bound, a gentle Glyſter may make it leſs painful to go to Stool.

Vedelius obſerves, that even Ointments do not always do good, becauſe they enlarge the Veins, hinder Tranſpiration, and encreaſe the Heat, for moſt of them are made of hot Things.

I cannot think great Dryers, and hot Aromaticks, can be properly applied, for thoſe will hinder both Perſpiration and Circulation, and encreaſe Pain. The leſſer Celandine dryed, and infuſed in Beer (ſmall Beer to be ſure) is much commended, but Dr. *Chene*, in his late Diſcourſe of nervous Diſtempers, has an high Opinion of Flower of Brimſtone. How to be taken, he does not there ſay, but I ſhould think, boiled in Water, and drank, would do very well. There is no great Nicety as to the Quantity. There are ſeveral Herbs that are counted almoſt Specificks in this Caſe, ſuch as Figwort, Milfoil, Houſleek, Mullen, *&c.*

As

As to the external Hemorrhoids, an extemporary Preſcription of an Ointment or Plaiſter might be made of theſe to apply to the Fundament. And as to the internal, a Decoction of thoſe in Water, with a little Milk and Sugar added, might be given by Way of Glyſter, very cool to prevent the Increaſe of the Pain, or a Glyſter of nothing but common Water, a very little warmed, (or if it were cold perhaps it would be never the worſe) we find what an Influence a Linen Rag dipped in Water, and laid on the Part, and often repeated, has to promote the Circulation, and prevent the Stagnation of the Blood, in Bruiſes by Falls, or Strokes.

Riverius ſays, *Aqua frigida ſola pro fotu aut inſeſſu eſt utiliſſima, in hieme ſit tepida.* Cold * Water, without any Thing elſe, either to ſit over it, or to bathe with it, is very good, but he would have it lukewarm in Winter, tho', I think, as to that, 'tis no great Matter whether it be or no. According to him, it would be good to have a large Cloſe-ſtool filled with Water, and to ſit often over it, and every time

* I doubt not it is very good for thoſe that are troubled with any Diſeaſes of the Bladder, the Strangury, &c. always to make Water into a Veſſel of cold Water.

we go to Stool, have it emptied, and filled with freſh Water.

And if we took a Linen Cloth in ſeveral Folds, and dipped it in cold Water, and wrung it a little, and laid it cloſe to the Fundament, till it were warm and dry, which might eaſily and without much Trouble be done, and renewed it often, it might perhaps ſave us the Daub and Trouble of Ointments and Plaiſters. And whereas, ſometimes (tho' very rarely) Ulcers, Fiſtula's, and Gangrenes, proceed from violent Hemorrhoids, I am apt to think, ſuch a cool Proceſs as this, would be as to theſe Conſequences, ſafer for the Patient. How far Leeches may in the external Hemorrhoids, be ſafely and properly applied to the Fundament, is a Diſpute among the Phyſicians, and I leave it to them to determine it.

Of the DIABETES.

THE Diabetes is ſuch a continual Flux of Urine, as weakens and waſtes the Body, and if it cannot be ſtopped will be mortal.

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Sometimes a great Flux of Urine may carry off ſome Diſtempers, as a Fever, Dropſy, &c. but then it generally ceaſes of it ſelf in ſome Time.

It is always joined with a Fever, as appears by the great Thirſt it brings, but whether the Fever by Colliquation of the Blood cauſes the Diabetes, or the Diabetes by drawing off the Serum cauſe the Fever, perhaps is not very certain.

Authors tell us ſtrange Things of the Quantity of Urine voided in this Diſtemper. *Dodoneus* tells us of one that voided forty Pounds every Day. And *Gallinaria*, as I find him cited by *Sennertus*, of a Girl, that made thirty-ſix Pounds of Urine every Day, for ſixty Days together, and yet was cured. (I could wiſh we had been told what cured her.) So that ſhe made a great many Times the Weight of her whole Body (beſides what ſhe took in) in that Space of Time. The Phyſicians knew not what to make of it, but at length attributed it to a continual Influx of moiſt Air.

The Cauſes of this Diſtemper, aſſigned by Phyſicians, are ſo various, as ſhews how much they are at a Loſs in theſe Things.

Many aſſign the Heat of thoſe Parts, which, they ſay, attracts the Serum from the Veins, Liver, Inteſtines and Stomach. But this is all a Jeſt, and impoſſible, beſides that, many have this Heat without any Diabetes. And one would think this ſhould rather cauſe a Strangury than a Diabetes, and rather obſtruct and conſtringe, than too much open the Paſſages of the Reins.

On the contrary, ſome (as *Trincevellius*) aſſign as the Cauſe, the Weakneſs of the Reins contracted by Cold, when the Veſſels of the Reins are too looſe and flabby.

Dr. *Pitcairne* ſays it is well known, the Diabetes cannot proceed but either from the Serum too much attenuated, or the Pores of the Skin too much contracted, or the Paſſages of the Reins too much dilated. And with him agrees Dr. *Shaw*, in his late *new Practice, &c.* But they give no Reaſon why the Serum is attenuated, and it does not ſeem to be more attenuated than it is in Fevers, before what they call Concoction. And one would think the Diabetes ſhould be more frequent, when the cuticular Veſſels are ſo often obſtructed, and one may eaſily conceive that the renal Paſſages may be dilated by a great Flux of Serum, rather than that the

Dilata-

Dilatation of them ſhould cauſe the Flux of Serum.

There are a great many Phyſicians that ſeem to think, that the Cauſe of the Diabetes lies, neither in the Attenuation of the Serum, nor in the opening of the renal Veſſels, nor in the Conſtriction of the Pores of the Skin, but in a particular Diſpoſition and Colliquation of the Blood, whereby the Serum, for Want of a due and full Mixture with the ſaline, ſulphureous, and oily Parts of the Blood, is ſeparated, and flows off from the Bulk of the Blood, and this ſuppoſed, the moſt eaſy and open Paſſage for the Liquids of the Body, will be that of the Reins. And whatever the Cauſe may be of this Colliquation, ſo great a Quantity of Serum preſſing that Way, will ſtill make thoſe Paſſages more open, and there needs no Attraction of the Serum in this Caſe, any more than there does when Water has made itſelf a Channel, that it ſhould run in that Channel. Now, moſt Phyſicians, except thoſe before-mentioned, agree, that there is ſome ſuch Colliquation or Diſſolution of the Craſis, and Compages or Mixture of the Parts of the Blood. And then, as in the melting of Bodies, that conſiſt of more ſolid and more liquid

Parts,

Parts, the moſt liquid Parts will run off firſt, and the readieſt and openeſt Paſſage in this Caſe, is that of the Reins.

Now, as to the Cauſe of this Colliquation, they are not agreed, but they generally aſcribe it to an hot Cauſe, and it is certain this Diſtemper is more common in the hot Southern Countries, than it is in the Northern Climates.

Sennertus cites *Rabbi Moſes*, who ſays, he had ſeen it twenty times in *Egypt*, but hardly ever in the north-weſtern Countries.

Platerus aſcribes it to a certain Sort of Fever, that is very rare, and therefore the Diabetes happens but ſeldom, but he can give no Account of it. Only it is certain, ſomething like a Diabetes happens, in ſome malignant Fevers, but ſtill we are in the dark as to the true Cauſe of the Colliquation. Only, it is generally aſcribed to ſome Kind of Salts in the Blood, and this is the more probable, becauſe the Urine in a Diabetes is not ſalt, which is an Evidence, that the Salts that uſed to be evacuated by Urine, ſtay in the Blood..

Others aſcribe it to the Bile, or to a ſalt Phlegm or Serum. But theſe

abound

abound in many Diſtempers where there is nothing of a Diabetes, but rather the contrary, and there is nothing of theſe appear in the Urine in a Diabetes, which yet muſt needs be if the Serum were ſalt, and the Bile abounded, as it does in the Jaundice.

Riverius ſuſpects, that this Diſtemper proceeds from ſome Sort of Poiſon generated in the Body, that diſſolves the Craſis of the Blood, and looſes the Serum from the groſſer Parts of the Blood. That Poiſon may be generated in the Body, appears from Tetters, which ſome have all their Life Time, and tho' they void very little Matter, yet it is of ſuch a Nature, that if they be wholly ſtopped, they will either break out in ſome other Part, or turn to ſome Diſtemper. But ſtill this is all but Suppoſition.

Etmuller thinks, this Diſtemper comes from a ſharp volatile Ferment, like the volatile Salt of Cantharides. But this, tho' it might cauſe Plenty of Urine, yet it would probably bring ſuch an Heat of Urine, as would bring ſomething of a Strangury, whereas there is no Pain in the Diabetes, unleſs the Urine be kept too long, which will bring a Pain in the Kidneys, and Parts there-

thereabout, from the Diſtention of the Veſſels.

But this Diſtemper is moſt generally aſcribed to ſome Salts in the Blood, that, as they ſay, precipitate the Serum.

Some of the Chymiſts talk of a *Sal chronicum permanens fixum*, a certain ſtubborn fixed Salt. *Willis* aſcribes it to ſome ſharp volatile Salts, and therefore one of his Intentions in the Cure is to give Things to break the Concretions of theſe Salts.

The *Carteſians* likewiſe talk of a Salt that precipitates the Blood.

Doleus, of a peculiar Acid that precipitates the Blood. And it is certain that ſome Acids are very Diuretick, as white Wine, Rheniſh, *&c.* And *Doleus* gives an Inſtance of a Relation of his, that fell into a Diabetes by Drinking a great Quantity of Cider. Dr. *Chene* ſeems to make Concretions of ſome Kind of Salts in the Blood, to be the Cauſe of moſt Diſtempers, as *Borelli* had done before him.

Now, if we ſuppoſe ſuch Concretions of Salts in the Blood, that the Serum cannot come to a juſt and proportionate Mixture with the other Parts of the Blood, there needs no Precipitation

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in the Caſe, for the Serum will go off of it ſelf, and moſt likely by Urine, becauſe that is the moſt open Paſſage. And this ſeems to be the Caſe of colliquative Fevers. And it ſeems the more likely that the Salts of the Blood ſhould be in Fault, becauſe, as it is plain, that there are a conſiderable Quantity of Salts in the Blood, ſo it is as certain, that in an healthful Body a great deal of theſe Salts go off by Urine. And it appears by the Taſte of the Urine in a Diabetes, few or none of them go off that Way. Further, a Diabetes chiefly falls upon thoſe that feed high, and drink a great deal of ſtrong Liquors, and it has been known ſometimes to follow upon a great Debauch (for theſe are likely to fill the Blood with too great a Quantity of volatile or fixed Salts) or upon an immoderate Uſe of ſtrong Diureticks. Nay, *Trincavellius* gives an Inſtance of a Man that fell into a Diabetes, from drinking a great Quantity of Water. It is like he drank it when he was in a Sweat, or very hot, for we know that in that Caſe, a cool Tankard will bring a Pleuriſy, or any Fever, as the Body is diſpoſed, as ſoon as any Thing.

I will not be poſitive that there is any Thing in theſe Accounts, but this

is certain, that the Diabetes, if it cannot be cured, will in ſome Time waſte the whole Body, and prove mortal. For tho' the Nouriſhment of the Body be derived from the Blood, yet it is by its Serum, and the very fineſt Parts of it, that the Body is nouriſhed, and when the Blood is deſerted by its Serum, as it is in a great Meaſure in a Diabetes, and other Colliquations, Nouriſhment is at an End, for there are ten thouſand little Canals and Paſſages in the Body that are too fine for the groſſer Parts of the Blood to enter.

It is the Opinion of ſome Phyſicians and Anatomiſts, that there are Paſſages from the Stomach, thro' the Omentum, directly to the Bladder. *Doleus* aſſigns the opening of theſe Paſſages, as in Part the Cauſe of the Diabetes. And Dr. *Morgan*, in his late *Philoſophical Principles of Medicine*, aſſures us from his own Experience, that there are ſuch Paſſages. For if we open a Dog alive, and tie up his Ureters, yet ſtill the Bladder will be filled with Urine. *Doleus* thinks the opening of theſe Paſſages is at leaſt in Part the Cauſe of the Diabetes, becauſe, ſays he, it is impoſſible that Liquors ſhould paſs ſo quick, as they do in a Diabetes thro' the

the Circle of the Blood, to the Reins. But when the Bulk of the Blood circulates thro' the Body twelve or thirteen times in the Space of an Hour, that may not ſeem impoſſible. Whether, if there be ſuch Paſſages, the opening of them may not be in Part the Cauſe of a Diabetes, is more than I can pretend to determine. But that this muſt (if any Cauſe) be only a partial one, ſeems plain, for if there were no Liquids to paſs thro' the Blood for ſo long Time, as a Diabetes ſometimes laſts, the Blood muſt ſoon ſtagnate, and it would be impoſſible, that Life ſhould laſt ſo long as it does under that Diſtemper.

Now as to the Cure of this Diſtemper. The Compoſitions of *Sennertus* and *Riverius* conſiſt much of the cooling Herbs, Lettice, Purſlain, Mallows, Plantain, *&c.* which ſeem proper for the Fever, and if that be the Cauſe of the Diabetes, may be good for that too. They preſcribe alſo Stipticks, and ſtrong Aſtringents, ſuch as Comfrey, Sloes, Oak Bark, *&c.* *Riverius* ſpeaks likewiſe of Diaphoreticks, but intimates that they muſt be the more moderate ones, as China, Sarſap, *&c.*

Etmuller commends Chalybeat Water, with Shavings of Harts-horn boil-

ed in it. And Lime-Water, both ſimple and compound. And (which is remarkable) he recommends ſo great a Quantity of common cold Water as will force a Vomit, to be taken for four Days together, but whether this does Good by raiſing a Vomit, or by mixing with the Blood, in ſuch a Quantity, as may break the Concretions of Salts, imbibe and abſorb the Acids of the Blood (that are ſaid by many Phyſicians to precipitate the Serum, and cauſe the Diabetes) and bringing the Blood to its juſt Conſiſtence and Mixture, or Craſis, is a Query.

Pitcairne ſays, Aſtringents, Narcoticks, viſcous and mucilaginous Things are proper.

Dr. *Shaw*'s Preſcriptions chiefly conſiſt of great Dryers, as Lime-Water, Decoctum Album, Bol. Armen. Terra Japonica. Stipticks, as Dragon's-Blood, Blood-ſtone, Biſtort, Tormentil, the Cortex, and Gums, and Balſams. And ſome Narcoticks, as Laudanum Lond.

Dr. *Willis* commends, both as to Diet and Phyſick, mucilaginous and incraſſating Things.

Sylvius commends, among ſome cooling Things, all Sorts of Milk.

And if I could ſee any of theſe Simples, or any Compounds of them, recommended

mended by good and repeated Experience, I ſhould never diſpute againſt them. Elſe it is hard to believe, that ſuch a Courſe of Water as is in a Diabetes, at ſuch a Diſtance as the Reins are from the Stomach in the Circulation, ſhould be dryed up by Heaters and Dryers, or ſtopped by Stipticks and Aſtringents, *&c.*

But then if the Diabetes be a Kind of Fever, or at leaſt be accompanied with one, either as its Cauſe or Effect, all theſe Methods are apparently hurtful, or at leaſt not good for it, and never preſcribed in a Fever, unleſs we may except the Bark, and the Decoctum Album, and the Blood is already too hot, too dry, too thick (as Thickneſs implies Want of Moiſture, tho' it may be too thin as ſwelled and fuſed with Heat) and too viſcid, or if you will, too mucilaginous. And if the Fever (as ſome ſuppoſe) be the immediate Cauſe of the Diabetes, moſt of theſe Methods will be ſo far from curing it, that they will encreaſe it, for moſt of them will certainly increaſe the Fever, except ſome Preſcriptions of *Sennertus* and *Riverius*.

Now, let us conſider how far Water may probably be good for a Diabetes.

If

If the Diabetes can be ſuppoſed to proceed from the Heat of the Reins and Urinary Paſſages, nothing will more effectually cool them than a Quantity of common Water.

If the Paſſages be, from any unknown Cauſes, too open, cold Water is moderately conſtringing, eſpecially, if continued in a Quantity for ſome Time.

If the Pores of the Skin are ſo far obſtructed, as by the ſtopping of Perſpiration to produce a Diabetes, as Water gives the moſt eaſy and plentiful Sweat, if taken for ſome Time in Bed, it will cure the Fever, and probably in Time the Diabetes.

If there be any thing in that Reaſon given by Dr. *Pitcairne* and Dr. *Shaw* for a Diabetes, the Attenuation of the Serum, the true and effectual Way to thicken the Blood and Serum, is to dilute the Blood, and when there is a juſt Combination of the more groſs Parts of the Blood with the Serum by Means of that Dilution, the ſuperfluous Salts, Sulphur, and oily Parts of the Blood will go off with the Serum in the Urine, and ſo bring it to its true Conſiſtence, and by Degrees cure the Fever and Diabetes too. And this to me ſeems a likelier and ſurer Way to do it, than the moſt viſcous Diet or Phyſick, which

are

are by no Means proper for the Fever.

If there be any lurking Poiſon in the Blood, that may endanger the Craſis, and break the Conſiſtence of the Blood, Water, as it is the beſt Sudorifick, is likewiſe the beſt Alexipharmick. And I doubt not, I ſhall make it appear probable in a Diſcourſe on that Head, that as warm Water in a Quantity that will provoke Vomiting, is the beſt Thing to void Poiſons taken into the Stomach, ſo the Uſe of cold Water, inwardly and outwardly, will cure all Bites and Stings of poiſonous and mad Animals.

If the Diabetes were cauſed by too much Uſe of ſtrong Diureticks, ſuch as Lixiviate Salts, Cantharides, or the like, or by drinking too great a Quantity of Liquors that are very diuretick, ſuch as Cider, White, or Rheniſh Wine, or *March* Beer, or ſmall Beer that is turned ſour, Water, drank in ſome Quantity, may be likely to take off the bad Effects of them. And, I am apt to believe, will do it ſooner and better than any Alcalious Powders, which, tho' they may work effectually in the Primæ Viæ, the Stomach, and Bowels, yet cannot have ſo good an Effect upon the Reins and urinary Veſſels, becauſe they

have

have a great Way to go, and will be more or leſs diſperſed and altered before they get to the Reins, but Water taken in a Quantity, will eaſily and quickly make its Way thither.

If there be any peculiar Acid (as *Dolens* thinks) that can ſo break and diſſolve the Craſis and Mixture of the Blood, as to ſeparate and precipitate the Serum, and cauſe a Diabetes. As he ſuppoſes ſuch an Acid, I will ſuppoſe too that Water will correct it, and that better than any alcalious Powders, for the Reaſon juſt now given.

If we ſupppoſe with Dr. *Willis* ſome volatile acrid Salts, or with *Paracelſus* and his Followers, ſome *Sal chronicum fixum permanens*, ſome fixed Salt, ſo to confound the Craſis of the Blood, as to cauſe a Diabetes. I think, as Water is allowed by all to be the beſt Abſorber of volatile Salts, and the beſt Diſſolver of fixed Salts, it muſt be the moſt likely to prevent any Combinations of ſuch Salts before, or to abſorb, penetrate into, and diſſolve any preſent Combinations or Concretions of them. He ſays, indeed, that viſcous, glutinous, and incraſſating Things, admitted into the Blood, ſtick to the active Particles of the Salts, and hinder and ſeparate their Combinations, ſuch as Rice, Starch, and

mucila-

mucilaginous Vegetables, eſpecially, Gums and Reſines. Now, I ſhould think, that melting, imbibing, and penetrating them, ſhould do better than ſticking to them. When the Blood is too viſcid, eſpecially the concreted Parts of it, ſhall we make it more viſcid ſtill?

But the great Argument I would bring to prove that Water may likely cure a Diabetes, is taken from Experience.

It is well known that the *Briſtol* Waters have often cured a Diabetes. Now, the great Queſtion here, is, whether it be a Tincture of any Mineral that makes them effectual to that Purpoſe, or whether it be the Water it ſelf that works the Cure. If I ſhould think or aſſert, that it is the Water that does it, it will be hard to diſprove it, for common Water has ſeldom, if ever, been tried in this Diſtemper. I have occaſionally enquired of Phyſicians and others, what Mineral is ſuppoſed to tincture thoſe Waters. And I could never yet find any one that could give any clear Account of it. I have heard it ſaid, or ſuppoſed by ſome, that the Water is warm when it comes from the Well, and by others, that have drank of it at the Well, that they cannot perceive

it to be more warm than other Water that is pumped from a Well, and does not come from a Spring that appears above Ground. We know, Pump Water will in Winter, when juſt taken out of the Well, feel comparatively warm, and in Summer comparatively cold; but this is only becauſe the Air is very cold or very hot. I have heard ſome ſay, they think it comes from Lime-Stone, but this ſignifies nothing, becauſe that will give no Tincture, for any Stone will make Lime, if we be at the Coſt and Pains to burn it, and the hardeſt Stone will probably make the beſt Lime.

Dr. *Strother*, in his Eſſay on Sickneſs and Health, ſays, he has made the uſual Trials of theſe Waters, and finds they contain ſomething of Vitriol and Allum, but that their chief Ingredient is Chalk. (Which I have thought moſt probable a great while.) But I fancy the Tincture of Vitriol and Allum muſt be very weak, elſe it would appear to the Taſte. But we know Chalk gives a Softneſs, but no particular Taſte to Water.

Now, from this Obſervation of the Dr. it ſtill ſeems more probable to me, that common Water will cure the Diabetes, and that it is the Water, that

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by bringing the Blood to a due Mixture and juſt Conſiſtence, cures the Diabetes, and not the Chalk, by drying up the Serum. Chalk may be very good as an Alcali, to correct thoſe Acids in the Blood, to which ſome Phyſicians aſcribe the Precipitation of the Serum, and for this, Chalk Water would be as effectual, and much more innocent than Lime Water, commonly preſcribed in this Caſe. And if the Tincture of Chalk make the *Briſtol* Waters ſo effectual in a Diabetes, it may eaſily be mixed with common Water.

Now, if it ſhould prove true, as I am apt to believe, that common Water, drank as much and as long as the *Briſtol* Water, would cure a Diabetes, what a Convenience would it be, when perhaps not one of many that are troubled with that Diſtemper can well afford to go down thither, or ſend for thoſe Waters, or if the Diſtemper be bad, be able to take ſuch a Journey.

I might here go on, and treat particularly of all the Diſtempers of the Reins and Bladder, but it ſeems to me ſo clear, that Water is the beſt Drink to cure and prevent all or moſt of thoſe Diſtempers, that I ſhall here be very ſhort.

I have in my *Febrifugum Magnum* recommended Water as a good thing to cleanſe the Reins from Gravel, and to prevent the gathering of it in the Reins and Bladder. And this I can do from my own Experience, who tho' much troubled with Gravel and Pain, for the firſt forty Years of my Life, have never diſcerned any Gravel, nor had any Pain, ſince I drank ſome Water every Day.

'Tis certainly good for all nephritick Pains, for the Cholick (if I may ſo call it) in the Reins. This pretty often attends the Cholick of the Bowels, and Phyſicians have ſome Difficulty ſometimes to tell where the Cholick lies; and as I have proved from Reaſon and Experience, that Water will cure the Cholick of the Bowels, I no more doubt that it will cure that of the Reins. If any viſcid Matter be impacted in thoſe Parts, Water will dilute it, and by Degrees carry it off by Urine. If windy Vapours be gathered there, and thoſe by the Heat of the Parts (as they are ſometimes in the Bowels) be rarified, ſo as to extend the Veſſels, Water will condenſe them, and take away the Pain. And therefore Water muſt be good for the Lumbago Rheumatica, which is a Sort of Rheumatiſm in the Reins. Since

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Febrifugum Magnum came out, I have an Inſtance of a Man that had as bad a Fit of the Rheumatiſm as I have heard of. His Phyſician urged him to take a good Doſe of Water, for a Week he refuſed, but being in exceſſive Pain, at length he was perſwaded to take it, it put him in a large Sweat, and he was well in a little Time. I myſelf ſaw him not a Fortnight after, and he ſeemed to be as well as ever he was before.

And for the ſame Reaſon it muſt be good for the Stoppage of Urine, when the Cauſe lies in the Reins.

The Diſeaſes of the Bladder are, the Iſchury, or Stoppage of Urine. The Strangury, which is a continual Inclination to make Water when but little comes. And the Dyſury, or Heat of Urine. For the Dyſury and Strangury, I cannot doubt, but the drinking Water, eſpecially if mixed with a little Milk, is good, to cool the Heat, and take off the Sharpneſs of the Humours. As to the Iſchury, or Stoppage of the Urine, the caſe may be ſo ſometimes, that it may not be convenient to drink any thing at all, and then other Methods muſt be tried. Only one Thing I would hint, that ſometimes Difficulty of making Water may proceed from neglecting

too

too long to do it, for when the Bladder is ſtretched beyond its uſual Tone, it will not eaſily contract it ſelf to expel the Urine.

I fancy, in ſome very bad Caſes, in theſe Diſtempers, the cold Bath would be very good. Gum Arabick, diſſolved in Water, is ſaid to be very good in the Strangury or Dyſury.

To conclude, if People would drink every Day a moderate Quantity of Water, they would ſeldom be troubled with any of theſe Diſtempers in the urinary Paſſages, eſpecially if they uſe Exerciſe.

As to the Diſtempers peculiar to Women, I do not think fit to treat of them ſo largely, as I have done of ſome other Diſtempers. I will ſay in general, that I believe, that drinking a Draught of Water, once, or twice, or it may be thrice a Day, is the beſt Preſervative againſt all, or moſt of the Diſtempers that proceed from the Womb, as well as it is from many other Diſtempers that are common to both Sexes. And particularly againſt Hyſterick Fits, which the beſt Phyſicians think now to be proper Convulſions. And if young Women would drink a good Glaſs of Water every Morning, and walk after it as faſt as their Strength can well bear, but for one half or quarter of an Hour, they would

would ſeldom be troubled either with Want of their monthly Purgations, or with the Chloroſis, or Maid's Fever, or with any Pica or Malacia. We find by plain Experience, that Women that work hard, or ſtir much, and Servants that are always in Motion, ſeldom are ſubject to any of theſe Diſtempers. (Tho' poſſibly they may by Waſhing, ſtanding much in the Cold, or putting their Hands much in cold Water, when their monthly Flux is upon them, make it not ſo regular.) It is thoſe chiefly that ſit much and uſe little Exerciſe, that are liable to thoſe Diſtempers.

And if thoſe Women that are married, and with Child, would now and then drink a Glaſs of Water, I believe they might go on better to their Time, and have a better Time when it comes, and their Children would be more healthful and ſtrong, and likelier to live. Whereas, thoſe, that during their Pregnancy, drink nothing but Wine, or ſtrong Ale, *&c.* it is not ſo good either for them, or for the Child in their Womb.

But then if they indulge themſelves in drinking of Drams, one may, without being a Prophet, foretell, that few of their Children will live.

As to the Diſeaſes of Children, I believe it is very good while they ſuck, to give them Water often.

This, I believe, is good to keep the Milk from coagulating upon their Stomachs, which many Phyſicians think is the Original of many, if not moſt Diſeaſes in Children. This, I believe, it will do better than any alcalious Powder whatever.

This, I believe, is good for Convulſions. If it be ſo in Men, why not in Children? I have known it take off very violent Convulſions in a Child not two Months old, which one may think could take no Quantity of it.

'Tis good for the Gripes, the Pains of which, 'tis probable, make ſome Children ſo troubleſome above others. They have not Reaſon enough to cry out of Peeviſhneſs. Certainly ſomething ails them, tho' they cannot tell us what or where it is.

Water is very good for Children when they are breeding their Teeth. This would prevent the Fever, that often follows upon the Pain of it, and by cooling the Blood, prevent any Flux of Humours upon thoſe Parts, and give Nature Time to do its Work.

If wet Nurſes would now and then drink a Glaſs of Water, eſpecially when they go to Bed, it would not only increaſe their Milk, but alſo, by cooling, thinning, and ſweetning it, make it more wholſome, and leſs apt to coagulate and turn ſour upon the Stomachs of their Children.

The drinking of Water is very good for the Rickets, a Diſtemper in Children, that is ſo much more common in *England* than in other Countries, that it is called by foreign Writers *Rachitis Anglorum*, the *Engliſh* Diſtemper called the Rickets.

That this Diſtemper is more common in *England* than in other Countries, cannot be imputed to our Air, which is as good as that of any other Country under the ſame Climate, and that borders upon the Sea. It muſt proceed from ſome particular Management of our Children that is not ſo common in other Countries.

1. I cannot but think, our letting our Children eat ſo much Fleſh, and other groſs Diet, while they ſuck the Breaſt, is the Occaſion of this and other Diſtempers, and that more in *England* than other Countries. This not very well agreeing with a conſtant Milk Diet, muſt for Want of an equable Concocti-

on, fill the Body with Humours, which ſtagnating in ſeveral Parts, will beget Obſtructions, and an unequal Nutrition of the Parts, the confeſſed Cauſes of this Diſtemper.

2. The ſtrait ſwadling of our Children, as ſoon as they are born, and ſome Time after, and that both Day and Night, I doubt is of pernicious Conſequence to their Health. This is often done to that Degree, that the poor Children have no full and free Reſpiration for a long Time together. Now whatever the Office of the Lungs, and the Air inſpired, is, with reſpect to the Blood, we are ſure it is ſomething abſolutely neceſſary to Life, for we cannot be a Minute without breathing. Now, if the total ſtopping of our Breath but a Minute, be mortal, the Conſequence of ſo great and long a Reſtraint upon free Reſpiration cannot be good, and the Blood will want ſomething that it receives from the Air in the Lungs, that is neceſſary to its free and regular Circulation.

And this is ſo much the worſe, in that the Blood hath hardly learnt the Way thro' the Lungs in the poor new-born Infant, there being no Circulation thro' the Lungs in the Womb.

3. That

3. That which I fear, is, more than both the other, the Cauſe of the Rickets in Children, is the Management of wet and dry Nurſes.

It is obſerved, that this Diſtemper never appears till after ſix, eight, or ten Months, or a little before the Children of Courſe might be taught to daddle themſelves. And it is as eaſy to obſerve, that Nurſes (that they may have one Hand free to do what they pleaſe) hang the poor Child by the Hams upon the other Arm. Which has two bad Effects, Firſt, it cripples that Joint, and makes it weak, and ſecondly, the Children to keep themſelves from falling backward, being forced to lean forward over their Bellies, it naturally contracts and cloſes the Hypochondria, and begets Obſtructions in all thoſe Parts, upon which follows great Weakneſs, and an unequal Nouriſhment, and is the very ſame Caſe with that of thoſe that ſit much to read and write, who, if they take not great Care will eaſily become Hypochondriack. But much worſe in Children, becauſe they cannot uſe any Exerciſe to prevent or open ſuch Obſtructions. And therefore Parents ſhould be very careful to charge their Nurſes as they hold the Child upon one Arm, to hold their Bodies

with the other Hand, that the Child may ſit upright. And to prevent Inconvenience this Way, it would do well, if either the Parent or Nurſe would ſit down ſometimes, ſtretch out their Legs, and lay the Child with its Head downwards, and ſhake it, which would looſen the Hypochondria, and Belly, and in ſome Meaſure prevent thoſe Obſtructions.

Some may ſmile at theſe Obſervations, as trivial. But I will appeal to any one, if ſome Giant-like Man ſhould hang one of us by the Hams upon his Arm, for a Day together, whether it would not cripple our Knees, and if this ſhould be done frequently, for Months together, beget great Obſtructions too.

Cold Bathing, or Waſhing the Child is often preſcribed in this Diſtemper, and I am ſatisfied, Water taken inwardly, when it is ſo great an Aperient, muſt be good in this Caſe.

I forgot to acquaint my Reader, when I was ſpeaking of Women's Diſtempers, that I have heard of a Lady, that pretended ſhe had it from one that underſtood Midwifry.

That when a Woman with Child longs for any Thing, and is diſappointed of it, if ſhe would ſpeedily take a good

good Doſe of cold Water, neither ſhe, nor the Child in her Womb, would receive any Harm by it. It is certain a Glaſs of Water is good for any one that is affected with a ſudden violent Fear or Fright, and why may it not be ſo for one that is ſuddenly affected by a violent Deſire, the one comes from the Mind and Fancy as well as the other, and the ſudden Fear is no more mechanical, than the ſudden longing Deſire.

I am apt to think that the Uſe of cold Water might in ſome Caſes be proper in Surgery, as well as Phyſick. I ſhall therefore here acquaint my Reader with a Caſe or two, of the Truth of which I am very well informed.

Of the Cure of Ulcers by cold Water.

A Gentleman, now alive in this City, has told me, that when he was a Boy he had an Ulcer in his Leg, ſomewhere upon or near his Ancle. He had a Surgeon to dreſs it for ſix Weeks, without any Advantage. It being Summer Time, he would not forego his Pleaſure for his ſore Leg, but pulled off the Dreſſing, and bathed in a River, for ſeveral Days, and putting on the Dreſſing again, let no Body know of it. This he did for near a Week,

a Week, and by that Time the Ulcer was healed, and he was perfectly well.

Since he came to *London*, and was in Buſineſs, the Ulcer broke out again, in the ſame Place, and was very bad. He made Uſe of an able Surgeon, I think, he ſaid, for ſome Months, and found himſelf no better. He remembring what had hapned to him when he was a Boy, took to the ſame Remedy, held his Leg at Times in a Pail of cold Water, and in ſome Time was perfectly cured. This I had from his own Mouth.

This we know by Experience, that when we cut a Finger, if we hold it a while in cold Water, ſuck out the Blood, cloſe the Wound, and lap a wet Rag about it, and keep the Air from it a while, the Wound will heal of it ſelf.

Cold Water is an excellent Thing for a Strain, if ſpeedily applied, in any Part that can be held in Water, nor is there any Danger, as ſome ſuggeſt, for we need not hold it ſo long in the Water as to endanger the ſtarving of the Part, we may prevent that, by taking it out ſometimes, and rubbing it dry, and putting it into the Water again.

I once ſaw a Gentleman, that running over a Room, ſtumbled, and fell with

with great Violence, and putting his Hands before him to ſave his Face, ſtrained his right Wriſt to that Degree, that the Tendon immediately roſe into a Knot or Bulch, as big as a midling Hazle-Nut. I adviſed him immediately to hold his Hand and Arm in a large Baſon of cold Water. This he did for about a Quarter of an Hour, taking it out ſometimes, in that Time the Knot was gone, and his Pain was eaſed, and the next Day he made no Complaint. Many a leſs Strain than that was, has been troubleſome for a Quarter of a Year, and perhaps, without this ſudden Help, he might have carried the Knot with him to his Grave.

I have an unqueſtionable Story of cold Water curing a Gangrene in the Leg. A very conſiderable Tradeſman in this City, had a Gangrene in his Leg, I ſuppoſe all the common Means were uſed to ſtop it. It went ſo bad, that he had a Conſult of Phyſicians and Surgeons, to conſider what was fit to be done. They agreed that the Leg was to be cut off the next Day. A poor Woman coming to the Houſe the Evening before, and hearing the Servants talk that their Maſter's Leg was to be cut off the next Day, ſaid to this Purpoſe, My Maſter will not believe me, but I think,

think, I could cure his Leg. She talking with ſome Confidence, the Servants told their Maſter, ſhe was ſent for up. After ſome Diſcourſe, the Gentleman was reſolved to try the Experiment, ſuppoſing, that his Leg might be cut off if the Trial had no Effect. He was to put the gangrened Leg in a Veſſel of cold Water. The particular Management and Circumſtances I can give no Account of. The Gentleman's Leg was cured. I had this Account from a very good Friend of mine, and Acquaintance of his, and as much believe the Truth of it, as if I had ſeen it my ſelf, tho' I cannot tell the Story ſo circumſtantially as if I had had it from the Gentleman's own Mouth. I would have waited on him my ſelf, but that my Friend adviſed me not to do it, not knowing whether it would be acceptable to have a nice Enquiry made about it. He was afterwards Knighted, and lived moſtly in the Country, and I hear he is very lately dead. I only remark there is a vaſt Difference between this Method of Cure, and thoſe that are commonly uſed for the Cure of Gangrenes and Sphacelus's, as any one may ſee that conſults any Phyſicians or Surgeons that write of that Subject.

F I N I S.